Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
DRILL [✓ X] DEEPEN ☐ PLUG BACK ☐

b. TYPE OF WELL
OIL WELL [✓ X] GAS WELL ☐ OTHER SINGLE ZONE ☐ MULTIPLE ZONE ☐

2. NAME OF OPERATOR
Wexpro Company

3. ADDRESS OF OPERATOR
P. O. Box 458, Rock Springs, WY 82902

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface
SE¼ SE¼, 615' FEL, 657' FSL
At proposed prod. zone

5. LEASE DESIGNATION AND SERIAL NO.
U-18452-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
--

7. UNIT AGREEMENT NAME
Patterson

8. FARM OR LEASE NAME
Unit

9. WELL NO.
9

10. FIELD AND POOL, OR WILDCAT
~~Patterson Unit~~ Undesignated

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
33-37S-25E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
Approx. 14 miles North-Northeast of Hatch Trading Post, San Juan County

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
615'

16. NO. OF ACRES IN LEASE
640

17. NO. OF ACRES ASSIGNED TO THIS WELL
NA

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
NA

19. PROPOSED DEPTH
5810' Desert Creek

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
Gr 5345'

22. APPROX. DATE WORK WILL START*
Upon Approval

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4	9-5/8	36	~~1400~~ 1625	~~325~~ 415 sx Halliburton Lite w/10# gilsonite/sx, 2% CaCl & ¼# flocele/sx & 180 sx Reg w/3% CaCl & ¼# flocele/sx
8-3/4	7	23 & 26	5810	To be determined.

See attached drilling plan.

RECEIVED
JUN 7 1984
DIVISION OF OIL
GAS & MINING

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 6/12/84
BY: John R. Baza

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED [illegible] TITLE Drilling Superintendent DATE June 5, 1984

(This space for Federal or State office use)

PERMIT NO. ______ APPROVAL DATE ______

APPROVED BY ______ TITLE ______ DATE ______
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

Drilling Plan
Celsius Energy Company
Patterson Unit Well No. 9
San Juan County, Utah

1. & 2. SURFACE FORMATION, ESTIMATED TOPS AND WATER, OIL, GAS OR MINERAL BEARING FORMATIONS:

Morrison	- Surface, minor coal beds
Entrada	- 375
Carmel	- 530
Navajo	- 560
Chinle	- ~~1,350~~ 1575
Shinarump	- 2,150, minor coal beds
Cutler	- 2,320
Honaker Trail	- 4,320, gas
Paradox	- 4,840
Ismay (Base 2nd Shale)	- 5,400
Ismay Porosity	- 5,425, oil and gas
Ismay Shale	- 5,550
Lower Ismay	- 5,590
B Zone Shale	- 5,640
Desert Creek	- 5,660
Lower Bench	- 5,710
Desert Creek Porosity	- 5,725, objective, oil and gas
Salt	- 5,805
Total Depth	- 5,810

All fresh water and prospectively valuable minerals encountered during drilling, will be recorded by depth cased and cemented. All oil and gas shows will be tested to determine commercial potential.

3. PRESSURE CONTROL EQUIPMENT: (See attached diagram) Operator's minimum specifications for pressure control equipment requires an 11-inch 3000 psi double gate hydraulically operated blowout preventer and an 11-inch 3000 psi annular preventer. Surface casing and all preventer rams will be pressure tested to 1400 psi for 15 minutes using rig pump and mud. NOTE: Surface casing will be pressure tested to a minimum of 1000 psi; or one psi per foot of casing; or 70 percent of the internal yield of the casing, whichever is applicable. BOP's will be checked daily as to mechanical operating condition and will be tested by rig equipment after each string of casing is run. All ram type preventers will have hand wheels which will be operative at the time the preventers are installed.

Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout preventer controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and

operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs.

4. CASING PROGRAM:

Footage	Size	Grade	Wt.	Condition	Thread	Cement
1400	9-5/8	K-55	36	New	8 rd ST&C	325 sacks Halliburton Light with 10# gilsonite/sack, 2% CaCl, & 1/4# flocele/sack and 180 sacks Regular with 3% CaCl and 1/4# flocele/sack
3770	7	K-55	23	New	8 rd LT&C	To be determined.
2040	7	N-80	26	New	8 rd LT&C	To be determined.

AUXILIARY EQUIPMENT:

a) Manually operated kelly cock
b) No floats at bit
c) Monitoring of mud system will be visual
d) Full opening floor valve manually operated

5. MUD PROGRAM: A gel water base mud will be used from surface casing to total depth.

Sufficient mud materials to maintain mud properties, control lost circulation and to contain blowout will be available at the wellsite.

6. LOGGING: GR-CNL-FDC - surface casing to total depth
DIL-MSFL with GR & SP - surface casing to total depth
BHC with GR - surface casing to total depth

TESTING: Four Drill Stem Tests are anticipated as follows:

Test	Depth or Formation
1	4500' - Honaker Trail
2	5400' - Ismay
3	5460' - Ismay
4	5770' - Desert Creek

CORING: Three Cores are anticipated as follows:

5400'-5460' - Ismay
5460'-5520' - Ismay
5710'-5770' - Desert Creek

Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 15 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two copies of all logs, core descriptions, core analysis, well-test data,

geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with Form 3160-4. Samples (cuttings, fluids, and/or gases) will be submitted when requested by the District Manager.

7. ABNORMAL CONDITIONS, BOTTOM HOLE PRESSURES AND POTENTIAL HAZARDS:

If porosity is encountered in the Desert Creek zone, pressures of 3500 psi are expected, no potential hazards are anticipated, BHT of 125°F is expected.

8. ANTICIPATED STARTING DATE: Upon approval.

DURATION OF OPERATION: Approximately 18 days.

The operator will contact the San Juan Resource Area at 801-587-2201, 48 hours prior to beginning any dirt work on this location.

No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the District Manager. If operations are to be suspended, prior approval of the District Manager will be obtained and notification given before resumption of operations.

The spud date will be reported orally to the San Juan Area Manager, a minimum of 24 hours before spudding. A Sundry Notice (Form 3160-5) will be sent within 24 hours of spudding, reporting the spud date and time. The Sundry will be sent to the District Manager.

In accordance with Onshore Oil and Gas Order No. 1, this well will be reported on Form 9-329 "Monthly Report of Operations," starting with the month in which operations begin and continue each month until the well is physically plugged and abandoned. This report will be sent to the Moab BLM District Office, P. O. Box 970, Moab, Utah 84532.

If a replacement rig is contemplated for completion operations, a "Sundry Notice" (Form 3160-5) to that effect will be filed, for prior approval of the District Manager. All conditions of this approved plan are applicable during all operations conducted with the replacement rig.

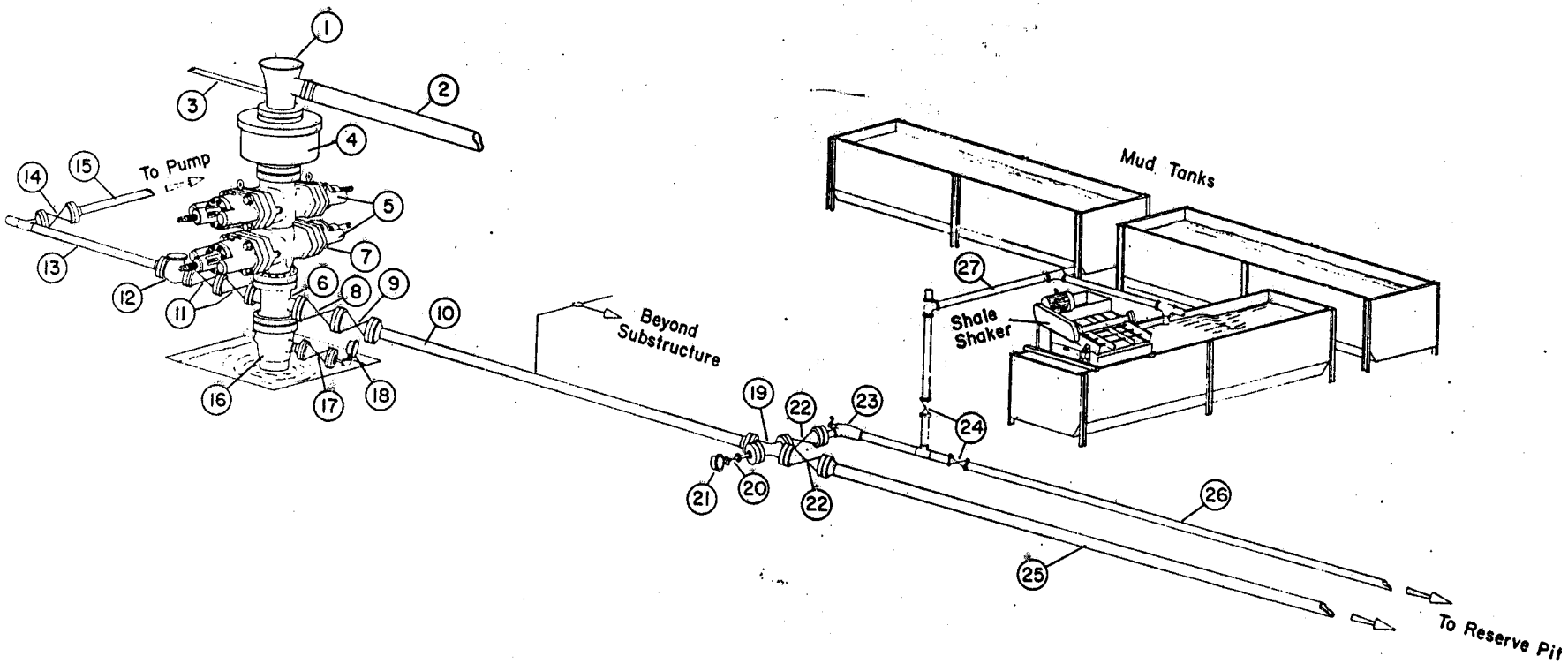
If the well is successfully completed for production, then the District Manager will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communication, not later than the first business day following the date on which the well is placed on production.

No well abandonment operations will begin without the prior approval of the District Manager. In the case of newly drilled dry holes or failures, and in emergency situations, oral approval will be obtained from the District Manager. A "Subsequent Report of Abandonment" (Form 3160-5), will be filed with the District Manager, within 30 days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration.

Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the San Juan Area Manager or his representative, or the appropriate Surface Managing Agency.

A first production conference will be scheduled within 15 days after receipt of the first production notice. The operator will schedule the conference with the San Juan Area Manager.

CELSIUS/WEXPRO
3000 psi BLOWOUT PREVENTION EQUIPMENT



STANDARD STACK REQUIREMENTS

Nº	ITEM	NOMINAL	ID	TYPE	FURNISHED BY	
					OPER.	CONTR.
1	Drilling Nipple (Rotating Head when air drilling)					
2	Flowline					
3	Fill up Line (eliminated for air drilling)	2"				
4	Annular Preventer			Hydril Cameron Shaffer		
5	Two Single or One dual Hydril oper rams.			U.ORC; F.LWS; B.E.		
6	Drilling spool with 3" and 2" outlets			Forged		
7	As Alternate to (6) Run & Kill and Choke lines from outlets in this ram					
8	Gate Valve		3-1/8			
9	Valve-hydraulically operated (Gate)		3-1/8			
10	Choke Line	3"				
11	Gate Valves		2-1/16			
12	Check Valve		2-1/16			
13	Kill Line	2"				
14	Gate Valve		2-1/16			
15	Kill Line to Pumps	2"				
16	Casing Head					
17	Valve Gate ____ Plug ____		1-13/16			
18	Compound Pressure Cage					
	Wear Bushing					

STANDARD CHOKE AND KILL REQUIREMENTS

Nº	ITEM	NOMINAL	ID	TYPE	FURNISHED BY	
					OPER.	CONTR.
19	Cross 3" X 3" 3" X 2"					
20	Gate Valve		1-13/16			
21	Compound Pressure Gage					
22	Gate Valves		3-1/8			
23	Choke Cam H-2 or equilivent	3"	2"			
24	Gate Valves		3-1/8"			
25	Line	3"				
26	Line	3"				
27	Line	3"				

OPERATOR Weppco Co. DATE 6-11-84

WELL NAME Patterson Unit #9

SEC SESE 33 T 37S R 25E COUNTY San Juan

43-037-31023	Fed
API NUMBER	TYPE OF LEASE

POSTING CHECK OFF:

☐ INDEX	☐ HL	☐
☐ NID	☐ PI	☐
☐ MAP	☐	☐

PROCESSING COMMENTS:

Unit Well -

Need Water

APPROVAL LETTER:

SPACING: ☑ A-3 Patterson UNIT ☐ c-3-a _____ CAUSE NO. & DATE

☐ c-3-b ☐ c-3-c

SPECIAL LANGUAGE:

1- Water

OK / Area/BLM

On recent plan of Development

6/11/84

ds.

- [x] RECONCILE WELL NAME AND LOCATION ON APD AGAINST SAME DATA ON PLAT MAP.
- [x] AUTHENTICATE LEASE AND OPERATOR INFORMATION
- [x] VERIFY ADEQUATE AND PROPER BONDING
- [x] AUTHENTICATE IF SITE IS IN A NAMED FIELD, ETC.
- [ ] APPLY SPACING CONSIDERATION
  - [ ] ORDER _____
  - [x] UNIT Patterson
  - [ ] c-3-b
  - [ ] c-3-c
- [x] CHECK DISTANCE TO NEAREST WELL.
- [ ] CHECK OUTSTANDING OR OVERDUE REPORTS FOR OPERATOR'S OTHER WELLS.
- [x] IF POTASH DESIGNATED AREA, SPECIAL LANGUAGE ON APPROVAL LETTER
- [x] IF IN OIL SHALE DESIGNATED AREA, SPECIAL APPROVAL LANGUAGE.

June 12, 1984

Wexpro Company
P. O. Box 458
Rock Springs, Wyoming 82902

RE: Well No. Patterson Unit #9
SESE Sec. 33, T. 37S, R. 25E
659' FSL, 615' FEL
San Juan County, Utah

Gentlemen:

Approval to drill the above referenced oil well is hereby granted in accordance with Section 40-6-18, Utah Code Annotated, as amended 1983; and predicated on Rule A-3, General Rules and Regulations and Rules of Practice and Procedure, subject to the following stipulations:

1. Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water.

In addition, the following actions are necessary to fully comply with this approval:

1. Spudding notification to the Division within 24 hours after drilling operations commence.

2. Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.

3. Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify R. J. Firth, Associate Director, Telephone (801) 533-5771 (Office), 571-6068 (Home).

4. Compliance with the requirements and regulations of Rule C-27, Associated Gas Flaring, General Rules and Regulations, Oil and Gas Conservation.

5. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-037-31023.

Sincerely,

R. J. Firth
Associate Director, Oil & Gas

RJF/as

cc: Branch of Fluid Minerals

Enclosures

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

REC'D MDO JUN 07 1984

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: U-18452-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: --

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER SINGLE ZONE [ ] MULTIPLE ZONE [ ]

7. UNIT AGREEMENT NAME: Patterson

8. FARM OR LEASE NAME: Unit

2. NAME OF OPERATOR: Wexpro Company

9. WELL NO.: 9

3. ADDRESS OF OPERATOR: P. O. Box 458, Rock Springs, WY 82902

10. FIELD AND POOL, OR WILDCAT: Patterson Unit

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: SE¼ SE¼, 615' FEL, 657' FSL

At proposed prod. zone:

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 33-37S-25E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: Approx. 14 miles North-Northeast of Hatch Trading Post, San Juan County

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 615'

16. NO. OF ACRES IN LEASE: 640

17. NO. OF ACRES ASSIGNED TO THIS WELL: NA

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: NA

19. PROPOSED DEPTH: 5810'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): Gr 5345'

22. APPROX. DATE WORK WILL START*: Upon Approval

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4	9-5/8	36	1400	325 sx Halliburton Lite w/10# gilsonite/sx, 2% CaCl & ¼# flocele/sx & 180 sx Reg w/3% CaCl & ¼# flocele/sx
8-3/4	7	23 & 26	5810	To be determined.

See attached drilling plan.

RECEIVED
JUL 5 1984
DIVISION OF OIL
GAS & MINING

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED A. J. Mascu TITLE Drilling Superintendent DATE June 5, 1984

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY /s/ C Delano Backus TITLE Acting DISTRICT MANAGER DATE 28 JUN 1984

CONDITIONS OF APPROVAL, IF ANY:

NOTICE OF APPROVAL

FLARING OR VENTING OF GAS IS SUBJECT OF NTL 4-A DATED 1/1/80

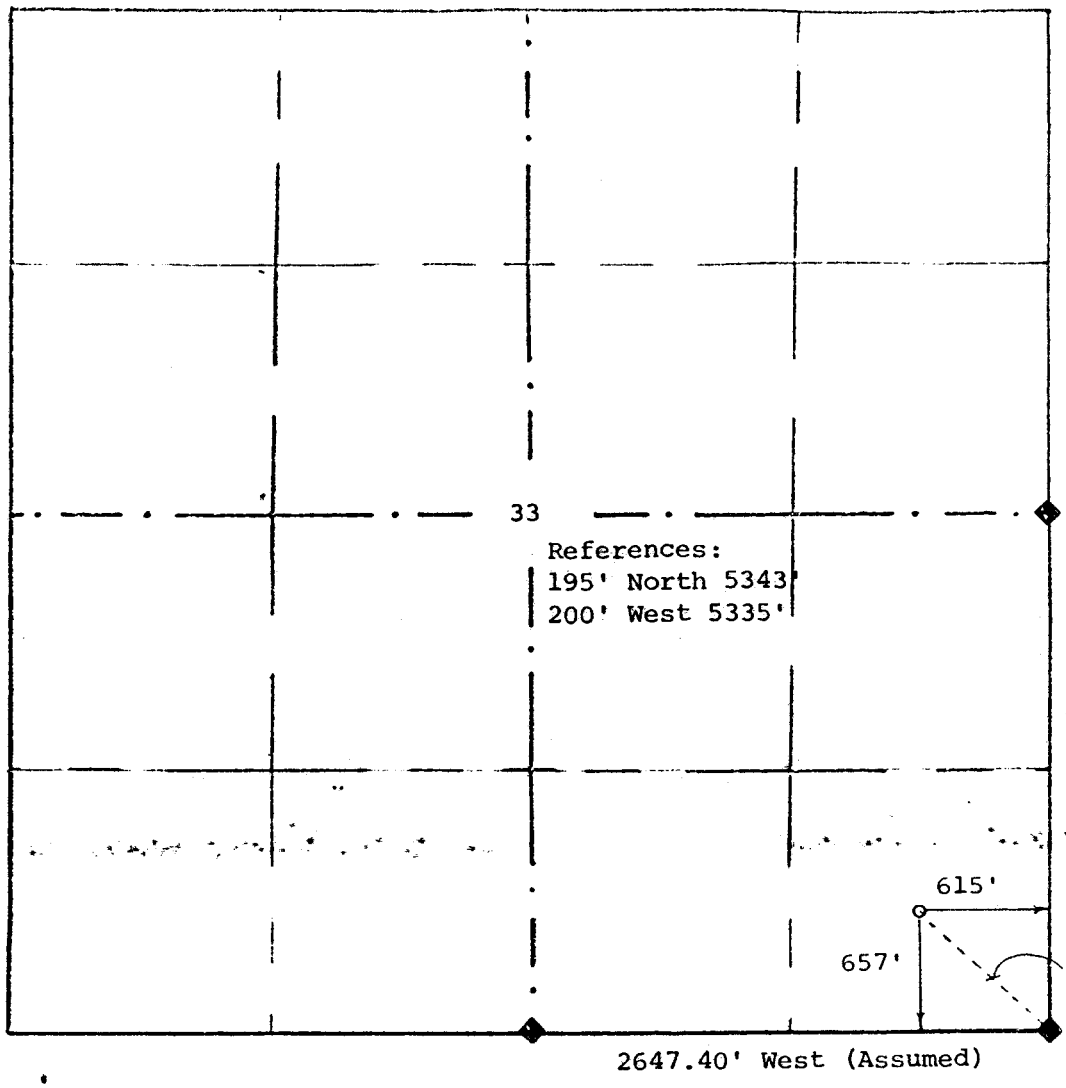
*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

State of Utah - DOGM

POWERS ELEVATION

Well Location Plat



Operator: Wexpro Company		Well name: ~~Nancy~~ Patterson Unit #9	
Section: 33	Township: 37 S	Range: 25 E	Meridian: S.L.M.
Footages: 657' FSL & 615' FEL			County/State: San Juan, Utah
Elevation: 5345'	Requested by: Jennifer Head		

The above plat is true and correct to the best of my knowledge and belief.

Gerald G. Huddleston

18 April '84

Gerald G. Huddleston, L.S.

REGISTERED LAND SURVEYOR
No. 5705
GERALD G HUDDLESTON
STATE OF UTAH

ONSITE

DATE: April 24, 1984

PARTICIPANTS:	TITLES:

Your contact with the District Office is: Robert (Bob) Graff

Office Phone: 801-259-6111 Ext 216

City: Moab State: Utah 84532

Resource Area Manager's address and contacts are: San Juan Resource Area

Address: 480 South First West, P.O. Box 7, Monticello, Utah 84535

Your contact is: Brian Wood

Office Phone: 801-587-2201

Residence Phone: 801-587-2087

Water OK
#54874

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

API #43-037-31023

NAME OF COMPANY: WEXPRO

WELL NAME: PATTERSON UNIT #9

SECTION SESE 33 TOWNSHIP 37S RANGE 25E COUNTY San Juan

DRILLING CONTRACTOR Arapahoe

RIG # 4

SPUDDED: DATE 8-11-84

TIME 4:00 AM

HOW Rotary

DRILLING WILL COMMENCE 1628' - 8-13-84

REPORTED BY Kathy

TELEPHONE # 307- 382-9791

DATE 8-13-84 SIGNED CJ

Form 3160-5
November 1983)
Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.: U-18452-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: --

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

RECEIVED
AUG 16 1984
DIVISION OF OIL GAS & MINING

1. OIL WELL [X] GAS WELL [ ] OTHER

7. UNIT AGREEMENT NAME: Patterson

2. NAME OF OPERATOR: Wexpro Company

8. FARM OR LEASE NAME: Unit

3. ADDRESS OF OPERATOR: P. O. Box 458, Rock Springs, WY 82902

9. WELL NO.: 9

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface: SE SE, 615' FEL, 657' FSL

10. FIELD AND POOL, OR WILDCAT: Patterson

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 33-37S-25E

14. PERMIT NO.: API: 43-037-31023

15. ELEVATIONS (Show whether DF, RT, GR, etc.): GR 5345'

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[XX]	(Other)			
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Request permission to alter drilling plan as follows:

Correct Chinle Top from 1350' to 1575'.

Run 1625' of 9-5/8-inch O.D. casing, cement with 415 sacks of Halliburton Light with 10 pounds gilsonite per sack, 2% CaCl and 1/4-pound flocele per sack, followed with 180 sacks Regular cement, and one-inch line pipe with 60 sacks.

Note:
Federal approval of this action is required.

ACCEPTED
~~APPROVED~~ BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 8/20/84
BY: John R. Baza

18. I hereby certify that the foregoing is true and correct

SIGNED A. J. Mascarenas TITLE Drilling Superintendent DATE August 13, 1984

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Form 3160-5
November 1983)
Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.: U-18452-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: --

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

RECEIVED
AUG 21 1984
DIVISION OF OIL GAS & MINING

1. OIL WELL [X] GAS WELL [ ] OTHER

7. UNIT AGREEMENT NAME: Patterson

2. NAME OF OPERATOR: Wexpro Company

8. FARM OR LEASE NAME: Unit

3. ADDRESS OF OPERATOR: P. O. Box 458, Rock Springs, WY 82902

9. WELL NO.: 9

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: SE SE, 615' FEL, 657' FSL

10. FIELD AND POOL, OR WILDCAT: Patterson Unit

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 33-37S-25E

14. PERMIT NO.: 43-037-31023

15. ELEVATIONS (Show whether DF, RT, GR, etc.): GR 5345'

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other) Supplemental History			[xx]
(Other)			[ ]	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Depth 3280', drilling.

SPUDDED 8-11-84 at 4:00 A.M.

18. I hereby certify that the foregoing is true and correct

SIGNED A. J. Mauer TITLE Drilling Superintendent DATE 8-15-84

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

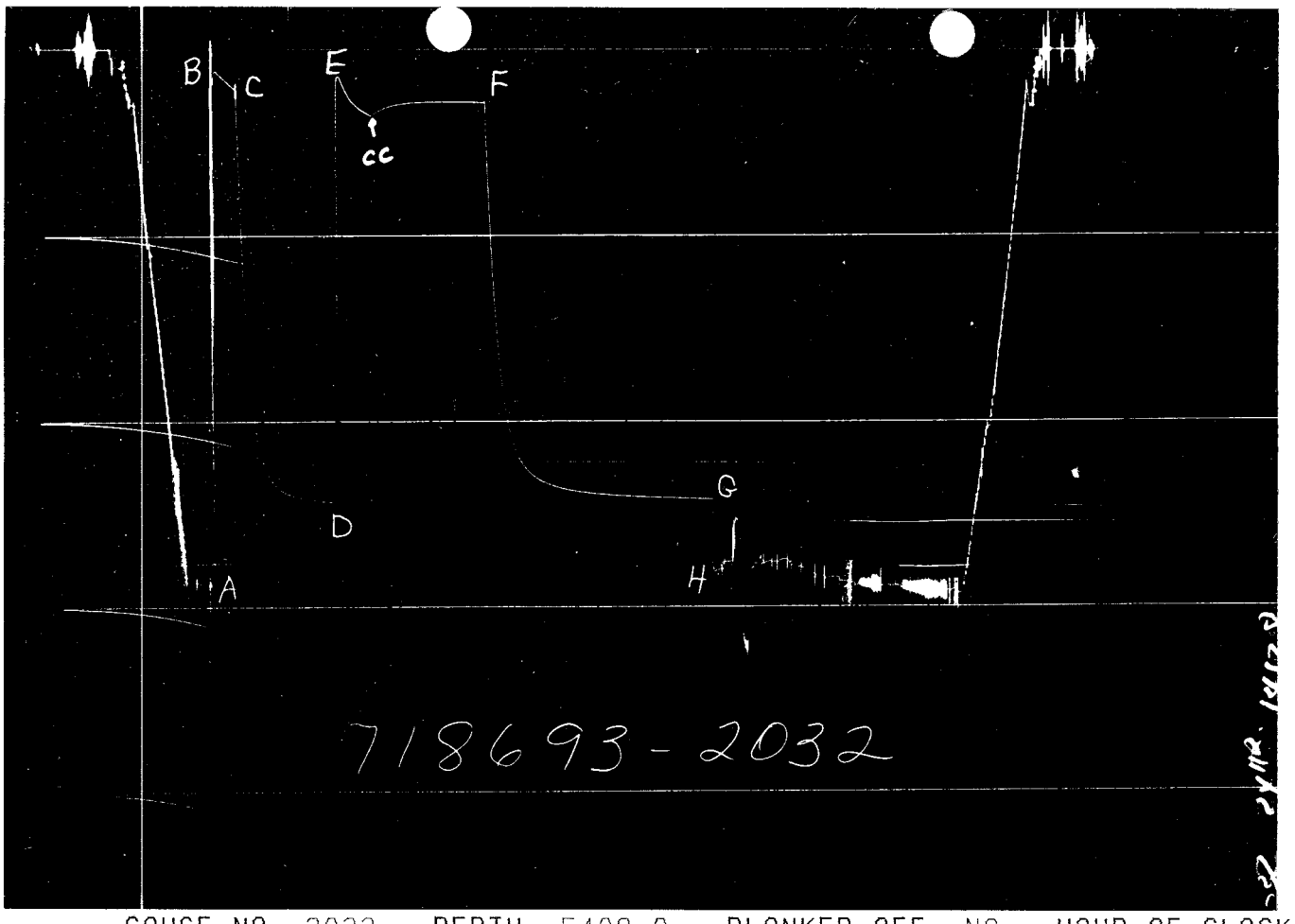
HALLIBURTON
SERVICES

TICKET NO. 71869300
31-AUG-84
FARMINGTON

FORMATION TESTING SERVICE REPORT

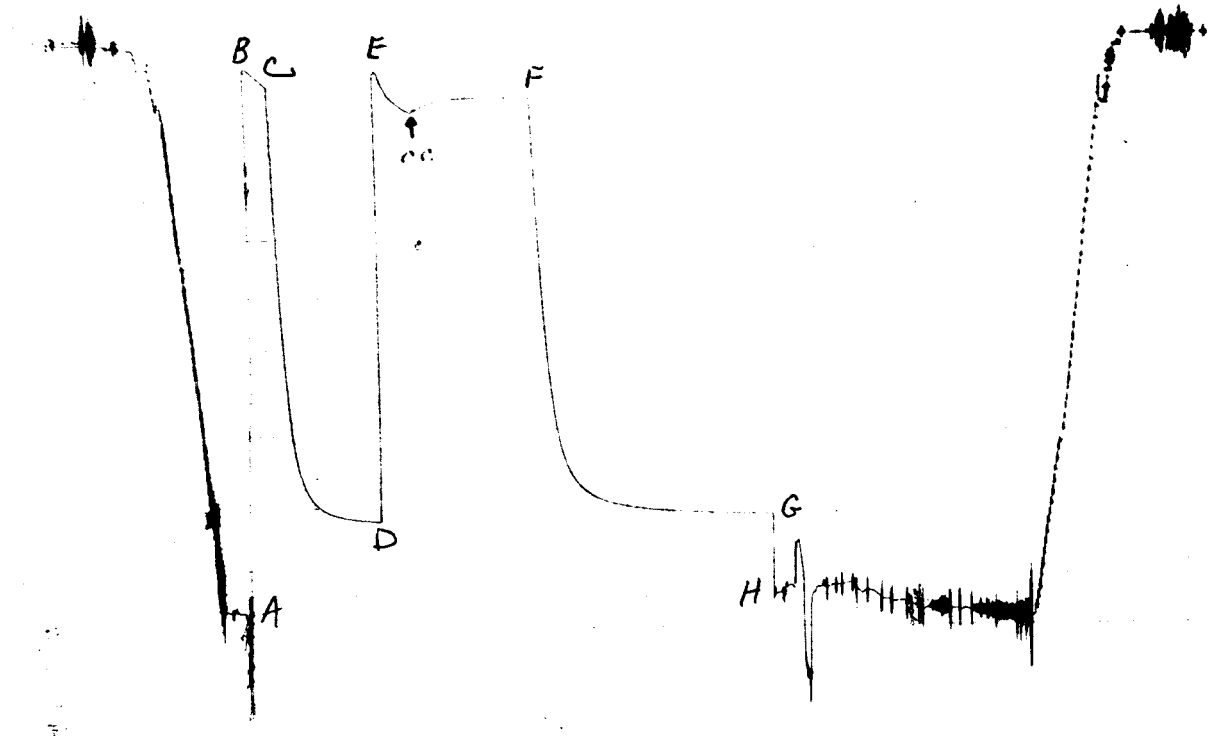
LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME
PATTERSON CANYON UNIT	9	1	5430.' - 5500.'	CELSIUS ENERGY COMPANY

LEGAL LOCATION SEC. - TWP. - RNG.	FIELD AREA	COUNTY	STATE
33-37S-25E	LITTLE NANCY	SAN JUAN	UTAH SM



GAUGE NO: 2032 DEPTH: 5409.0 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2875	2879.3			
B	INITIAL FIRST FLOW	100	121.7	31.0	26.2	F
C	FINAL FIRST FLOW	213	222.8			
C	INITIAL FIRST CLOSED-IN	213	222.8	121.0	121.7	C
D	FINAL FIRST CLOSED-IN	2438	2440.7			
E	INITIAL SECOND FLOW	100	159.1	180.0	178.2	F
F	FINAL SECOND FLOW	280	289.1			
F	INITIAL SECOND CLOSED-IN	280	289.1	270.0	271.1	C
G	FINAL SECOND CLOSED-IN	2424	2422.7			
H	FINAL HYDROSTATIC	2783	2801.3			



718693-2033

GAUGE NO: 2033 DEPTH: 5497.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2916	2916.4			
B	INITIAL FIRST FLOW	134	145.7	31.0	26.2	F
C	FINAL FIRST FLOW	214	232.2			
C	INITIAL FIRST CLOSED-IN	214	232.2	121.0	121.7	C
D	FINAL FIRST CLOSED-IN	2451	2449.5			
E	INITIAL SECOND FLOW	161	173.8	180.0	178.2	F
F	FINAL SECOND FLOW	294	295.6			
F	INITIAL SECOND CLOSED-IN	294	295.6	270.0	271.1	C
G	FINAL SECOND CLOSED-IN	2411	2422.3			
H	FINAL HYDROSTATIC	2825	2829.7			

EQUIPMENT & HOLE DATA

FORMATION TESTED: UPPER ISMAY
NET PAY (ft): 30.0
GROSS TESTED FOOTAGE: 70.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 8.750
ELEVATION (ft): 5345
TOTAL DEPTH (ft): 5500.0
PACKER DEPTH(S) (ft): 5424, 5430
FINAL SURFACE CHOKE (in): 0.250
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 10.30
MUD VISCOSITY (sec): 43
ESTIMATED HOLE TEMP. (°F):
ACTUAL HOLE TEMP. (°F): 128 @ 5496.0 ft

TICKET NUMBER: 71869300

DATE: 8-28-84 TEST NO: 1

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: FARMINGTON

TESTER: DELL GUNN

WITNESS:

DRILLING CONTRACTOR: ARAPAHOE #4

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY		CHLORIDES
TOP	1.100 @ 60 °F		3696 ppm
MUD PIT	0.850 @ 60 °F		4848 ppm
	@ °F		ppm
	@ °F		ppm
	@ °F		ppm
	@ °F		ppm

SAMPLER DATA

Psig AT SURFACE: 90
cu.ft. OF GAS: 0.45
cc OF OIL: 600
cc OF WATER: 0
cc OF MUD: 0
TOTAL LIQUID cc: 600

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): 48.0 @ 60°F
GAS/OIL RATIO (cu.ft. per bbl): 132
GAS GRAVITY: 0.700

CUSHION DATA

TYPE	AMOUNT	WEIGHT

RECOVERED:

APPROXIMATELY 1200 FEET OF OIL AND GAS CUT MUD

MEASURED FROM TESTER VALVE

REMARKS:

TYPE & SIZE MEASURING DEVICE: .75" ADJUSTABLE CHOKE | TICKET NO: 71869300

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
8-27-84					
2125					ON LOCATION
2150					PICKED UP TOOLS
2245					TRIPPED IN HOLE WITH DST #1
8-28-84					
0105					ON BOTTOM
0110	1/8"BH	1 OZ.			OPENED TOOL WITH WEAK BLOW,
					4" IN BUBBLE BUCKET.
0115	"	7#			STRONG BLOW, BOTTOM OF BUCKET
0120	"	20#			SAME
0124	"	36#			SWITCHED TO CHOKE, STRONG BLOW.
0130	"	54#			
0135	"	64#	27		GAS TO THE SURFACE (25 MINUTES
					INTO FLOW)
0141	"	87#	36		CLOSED TOOL - 10' FLARE
0342	"	16#			OPENED TOOL - 8' FLARE
0348	"	100#	40		10' FLARE
0352	"	117#	45		12' FLARE
0358	"	133#	51		16' FLARE.
0405	"	155#	59		
0412	"	170#	64		
0420	"	180#	68		
0423	1/4"	185#	290		CHANGED CHOKES
0430	1/4"	170#	270		PSI DROPPING
0440	1/4"	145#	235		PSI DROPPING STEADILY
0450	1/4"	140#	230		SAME
0500	1/4"	130#	215		SAME
0510	1/4"	125#	205		SAME
0520	1/4"	120#	198		SAME
0530	1/4"	118#	195		PSI DROPPING SLOWLY
0540	1/4"	116#	191		SAME
0550	1/4"	115#	190		SAME
0600	1/4"	114#	190		SAME
0615	1/4"	113#	189		SAME
0630	1/4"	112#	188		SAME
0642	1/4"	112#	188		CLOSED TOOL - NO FLUID AT
					SURFACE.

TYPE & SIZE MEASURING DEVICE: .75" ADJUSTABLE CHOKE | TICKET NO: 71869300

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
1112					PULLED OFF BOTTOM, OPENED
					BYPASS
1135					DROPPED BAR AND REVERSED OUT
1155					SHUT DOWN, CONDITIONED HOLE.
1615					TRIPPED OUT OF HOLE WITH DST #1
2030					JOB COMPLETED.

TICKET NO: 71869300	GAUGE NO: 2032
CLOCK NO: 14128 HOUR: 24	DEPTH: 5409.0

HALLIBURTON SERVICES

FIRST FLOW

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
B	1	0.0	121.7			
	2	2.0	191.9	70.1		
	3	4.0	119.9	-72.0		
	4	6.0	127.9	8.0		
	5	8.0	137.1	9.2		
	6	10.0	147.7	10.7		
	7	12.0	157.2	9.5		
	8	14.0	167.7	10.5		
	9	16.0	176.5	8.8		
	10	18.0	186.0	9.5		
	11	20.0	195.7	9.7		
	12	22.0	204.7	8.9		
	13	24.0	213.7	9.1		
C	14	26.2	222.8	9.1		

FIRST CLOSED-IN

C	1	0.0	222.8			
	2	1.0	392.7	169.9	1.0	1.429
	3	2.0	520.5	297.7	1.9	1.144
	4	3.0	659.4	436.6	2.7	0.987
	5	4.0	778.8	556.0	3.5	0.878
	6	5.0	884.8	662.0	4.2	0.792
	7	6.0	965.3	742.5	4.9	0.732
	8	7.0	1063.7	840.9	5.5	0.677
	9	8.0	1167.8	945.0	6.1	0.633
	10	9.0	1257.8	1035.0	6.7	0.591
	11	10.0	1325.5	1102.7	7.2	0.560
	12	12.0	1478.3	1255.5	8.3	0.502
	13	14.0	1614.2	1391.4	9.1	0.458
	14	16.0	1727.2	1504.4	9.9	0.422
	15	18.0	1834.4	1611.6	10.7	0.391
	16	20.0	1926.5	1703.7	11.3	0.364
	17	22.0	1999.3	1776.5	12.0	0.340
	18	24.0	2068.2	1845.4	12.5	0.321
	19	26.0	2114.1	1891.3	13.1	0.303
	20	28.0	2161.6	1938.8	13.5	0.287
	21	30.0	2198.1	1975.3	14.0	0.272
	22	35.0	2259.7	2036.9	15.0	0.243
	23	40.0	2307.4	2084.6	15.8	0.219
	24	45.0	2339.1	2116.3	16.6	0.199
	25	50.0	2361.6	2138.8	17.2	0.183
	26	55.0	2377.4	2154.6	17.7	0.169
	27	60.0	2390.3	2167.5	18.2	0.157
	28	70.0	2406.6	2183.8	19.1	0.138
	29	80.0	2419.1	2196.3	19.7	0.123
	30	90.0	2427.4	2204.6	20.3	0.111
	31	100.0	2433.2	2210.4	20.8	0.101
	32	110.0	2437.4	2214.6	21.2	0.093
D	33	121.7	2440.7	2217.9	21.6	0.085

SECOND FLOW

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
E	1	0.0	159.1			
	2	20.0	290.4	131.3		
	3	40.0	356.1	65.7		
[1]	4	41.7	358.5	2.4		
	5	60.0	317.1	-41.5		
	6	80.0	296.3	-20.8		
	7	100.0	287.2	-9.1		
	8	120.0	285.1	-2.1		
	9	140.0	285.1	0.0		
	10	160.0	286.4	1.3		
F	11	178.2	289.1	2.7		

SECOND CLOSED-IN

F	1	0.0	289.1			
	2	1.0	462.0	172.9	1.0	2.323
	3	2.0	580.0	291.0	2.0	2.011
	4	3.0	678.4	389.4	3.0	1.837
	5	4.0	799.6	510.5	3.9	1.718
	6	5.0	896.8	607.8	4.9	1.622
	7	6.0	990.1	701.0	5.8	1.545
	8	7.0	1070.9	781.9	6.8	1.481
	9	8.0	1168.2	879.1	7.7	1.425
	10	9.0	1232.1	943.0	8.6	1.377
	11	10.0	1305.0	1015.9	9.5	1.332
	12	12.0	1438.0	1149.0	11.3	1.256
	13	14.0	1556.7	1267.7	13.1	1.193
	14	16.0	1663.0	1373.9	14.9	1.138
	15	18.0	1739.7	1450.6	16.5	1.092
	16	20.0	1817.9	1528.8	18.2	1.050
	17	22.0	1885.6	1596.5	19.8	1.013
	18	24.0	1941.5	1652.5	21.5	0.979
	19	26.0	1992.7	1703.7	23.1	0.947
	20	28.0	2039.0	1749.9	24.6	0.919
	21	30.0	2076.5	1787.4	26.2	0.893
	22	35.0	2146.7	1857.6	29.9	0.835
	23	40.0	2200.8	1911.7	33.5	0.786
	24	45.0	2238.4	1949.4	36.9	0.743
	25	50.0	2265.3	1976.2	40.2	0.707
	26	55.0	2287.8	1998.7	43.3	0.674
	27	60.0	2306.4	2017.3	46.4	0.644
	28	70.0	2331.6	2042.6	52.1	0.593
	29	80.0	2349.5	2060.4	57.5	0.551
	30	90.0	2362.4	2073.3	62.5	0.515
	31	100.0	2372.9	2083.8	67.2	0.483
	32	110.0	2380.3	2091.3	71.5	0.456
	33	120.0	2385.6	2096.6	75.6	0.432
	34	135.0	2393.6	2104.6	81.3	0.400
	35	150.0	2399.5	2110.4	86.5	0.373
	36	165.0	2404.1	2115.1	91.3	0.350

LEGEND:
[1] CHOKE CHANGE

REMARKS:

TICKET NO: 71869300

CLOCK NO: 14128 HOUR: 24

HALLIBURTON SERVICES

GAUGE NO: 2032

DEPTH: 5409.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
	SECOND CLOSED-IN - CONTINUED				
	37 180.0	2408.0	2118.9	95.7	0.330
	38 195.0	2411.4	2122.4	99.8	0.311
	39 210.0	2414.6	2125.6	103.6	0.295
	40 225.0	2416.9	2127.8	107.1	0.281
	41 240.0	2418.6	2129.6	110.4	0.268
	42 260.0	2421.4	2132.3	114.4	0.252
G	43 271.1	2422.7	2133.7	116.5	0.244

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$

LEGEND:
[1] CHOKE CHANGE

REMARKS:

TICKET NO: 71869300

CLOCK NO: 9756 HOUR: 24

HALLIBURTON SERVICES

GAUGE NO: 2033

DEPTH: 5497.0

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		FIRST FLOW				
B	1	0.0	145.7			
	2	2.0	143.0	-2.7		
	3	4.0	147.2	4.1		
	4	6.0	153.9	6.7		
	5	8.0	161.9	8.0		
	6	10.0	171.1	9.2		
	7	12.0	178.6	7.5		
	8	14.0	185.0	6.4		
	9	16.0	191.4	6.4		
	10	18.0	201.2	9.8		
	11	20.0	209.2	8.0		
	12	22.0	217.1	7.9		
	13	24.0	224.6	7.5		
C	14	26.2	232.2	7.6		
		FIRST CLOSED-IN				
C	1	0.0	232.2			
[1]	2	1.7	402.0	169.8	1.6	1.214
[1]	3	2.8	582.2	350.0	2.5	1.018
[1]	4	3.5	732.2	500.0	3.1	0.932
[1]	5	4.5	849.2	617.0	3.8	0.838
	6	5.0	921.1	688.9	4.2	0.793
	7	6.0	984.5	752.3	4.9	0.733
[1]	8	6.8	1075.3	843.0	5.4	0.688
[1]	9	7.2	1152.5	920.3	5.7	0.665
[1]	10	8.2	1216.2	984.0	6.2	0.624
	11	9.0	1329.3	1097.0	6.7	0.593
	12	10.0	1389.2	1157.0	7.2	0.558
	13	12.0	1504.9	1272.7	8.2	0.503
	14	14.0	1655.3	1423.1	9.1	0.459
	15	16.0	1763.3	1531.1	9.9	0.421
	16	18.0	1864.5	1632.3	10.7	0.390
	17	20.0	1930.0	1697.8	11.3	0.364
	18	22.0	2027.2	1795.0	12.0	0.340
	19	24.0	2081.7	1849.5	12.5	0.320
	20	26.0	2130.3	1898.0	13.0	0.303
	21	28.0	2172.8	1940.6	13.5	0.287
	22	30.0	2207.5	1975.2	14.0	0.273
	23	35.0	2269.6	2037.4	15.0	0.243
	24	40.0	2312.9	2080.7	15.8	0.219
	25	45.0	2346.7	2114.4	16.6	0.199
	26	50.0	2369.3	2137.1	17.2	0.183
	27	55.0	2387.2	2155.0	17.7	0.169
	28	60.0	2398.9	2166.7	18.2	0.157
	29	70.0	2416.7	2184.4	19.1	0.138
	30	80.0	2427.6	2195.4	19.7	0.123
	31	90.0	2435.5	2203.2	20.3	0.111
	32	100.0	2441.5	2209.2	20.8	0.101
	33	110.0	2444.9	2212.7	21.2	0.093

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		FIRST CLOSED-IN - CONTINUED				
D	34	121.7	2449.5	2217.2	21.6	0.085
		SECOND FLOW				
E	1	0.0	173.8			
	2	20.0	297.1	123.3		
	3	40.0	363.2	66.2		
[2]	4	41.7	365.6	2.4		
	5	60.0	326.9	-38.8		
	6	80.0	304.9	-21.9		
	7	100.0	296.1	-8.8		
	8	120.0	292.9	-3.2		
	9	140.0	292.9	0.0		
	10	160.0	293.4	0.5		
F	11	178.2	295.6	2.1		
		SECOND CLOSED-IN				
F	1	0.0	295.6			
	2	1.0	482.6	187.0	1.0	2.332
	3	2.0	591.5	295.9	2.0	2.013
	4	3.0	706.5	410.9	2.9	1.841
	5	4.0	828.9	533.3	3.9	1.716
	6	5.0	930.5	634.9	4.9	1.620
	7	6.0	1023.5	727.9	5.8	1.544
	8	7.0	1094.5	799.0	6.7	1.482
	9	8.0	1188.0	892.4	7.7	1.425
	10	9.0	1258.5	962.9	8.6	1.376
	11	10.0	1335.8	1040.2	9.5	1.332
	12	12.0	1444.8	1149.2	11.4	1.255
	13	14.0	1560.0	1264.4	13.1	1.193
	14	16.0	1667.3	1371.7	14.8	1.139
	15	18.0	1742.8	1447.2	16.6	1.091
	16	20.0	1817.5	1521.9	18.3	1.049
	17	22.0	1884.9	1589.3	19.9	1.013
	18	24.0	1944.9	1649.3	21.5	0.978
	19	26.0	1993.6	1698.0	23.0	0.948
	20	28.0	2041.3	1745.7	24.6	0.919
	21	30.0	2078.7	1783.1	26.2	0.892
	22	35.0	2148.1	1852.5	29.9	0.835
	23	40.0	2199.3	1903.7	33.4	0.786
	24	45.0	2238.0	1942.4	36.9	0.744
	25	50.0	2266.0	1970.4	40.1	0.707
	26	55.0	2288.0	1992.4	43.3	0.674
	27	60.0	2304.9	2009.3	46.4	0.644
	28	70.0	2333.5	2037.9	52.1	0.593
	29	80.0	2352.8	2057.2	57.5	0.551
	30	90.0	2365.6	2070.0	62.5	0.515
	31	100.0	2374.8	2079.2	67.2	0.483
	32	110.0	2383.1	2087.5	71.5	0.456
	33	120.0	2389.3	2093.7	75.6	0.432

LEGEND:
[1] STAIR-STEP [2] CHOKE CHANGE

REMARKS:
SLIGHT STAIR STEPPING THROUGHOUT CLOSED IN PRESSURE PERIODS.

TICKET NO: 71869300	GAUGE NO: 2033
CLOCK NO: 9756 HOUR: 24	DEPTH: 5497.0

HALLIBURTON SERVICES

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
	SECOND CLOSED-IN - CONTINUED				
34	135.0	2396.7	2101.1	81.3	0.400
35	150.0	2401.7	2106.1	86.5	0.374
36	165.0	2406.1	2110.5	91.3	0.350
37	180.0	2410.0	2114.4	95.7	0.330
38	195.0	2412.3	2116.7	99.8	0.311
39	210.0	2415.5	2119.9	103.6	0.295
40	225.0	2417.5	2121.9	107.1	0.281
41	240.0	2418.8	2123.2	110.4	0.268
42	260.0	2420.9	2125.3	114.5	0.252
G 43	271.1	2422.3	2126.7	116.5	0.244

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$

LEGEND:
[1] STAIR-STEP [2] CHOKE CHANGE

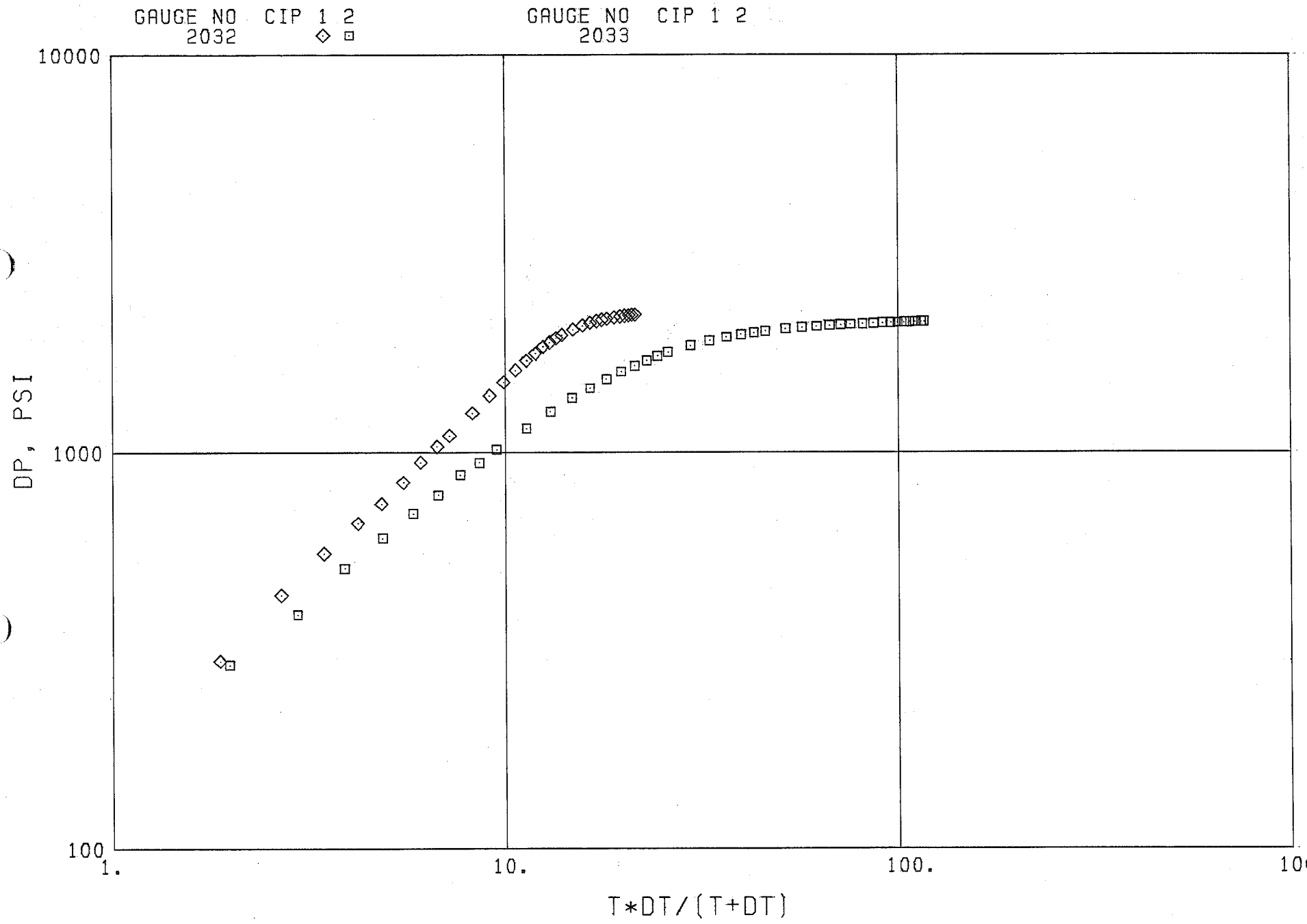
REMARKS:
SLIGHT STAIR STEPPING THROUGHOUT CLOSED IN PRESSURE PERIODS.

TICKET NO. 71869300

		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	4844.0	
3	DRILL COLLARS.....	6.250	2.250	458.0	
50	IMPACT REVERSING SUB.....	6.000	3.000	1.0	5302.0
3	DRILL COLLARS.....	6.250	2.250	92.0	
5	CROSSOVER.....	6.000	3.000	1.0	
13	DUAL CIP SAMPLER.....	5.750	0.750	7.5	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	5407.0
80	AP RUNNING CASE.....	5.000	2.250	4.0	5409.0
15	JAR.....	5.030	1.750	5.0	
16	VR SAFETY JOINT.....	5.000	1.000	3.0	
70	OPEN HOLE PACKER.....	7.750	1.530	6.0	5424.0
70	OPEN HOLE PACKER.....	7.750	1.530	6.0	5430.0
5	CROSSOVER.....	6.000	3.000	1.0	
3	DRILL COLLARS.....	6.250	2.250	31.0	
5	CROSSOVER.....	6.000	3.000	1.0	
20	FLUSH JOINT ANCHOR.....	5.750	3.000	31.0	
81	BLANKED-OFF RUNNING CASE.....	5.750		4.0	5497.0
	TOTAL DEPTH				5500.0

EQUIPMENT DATA

TICKET NO 71869300



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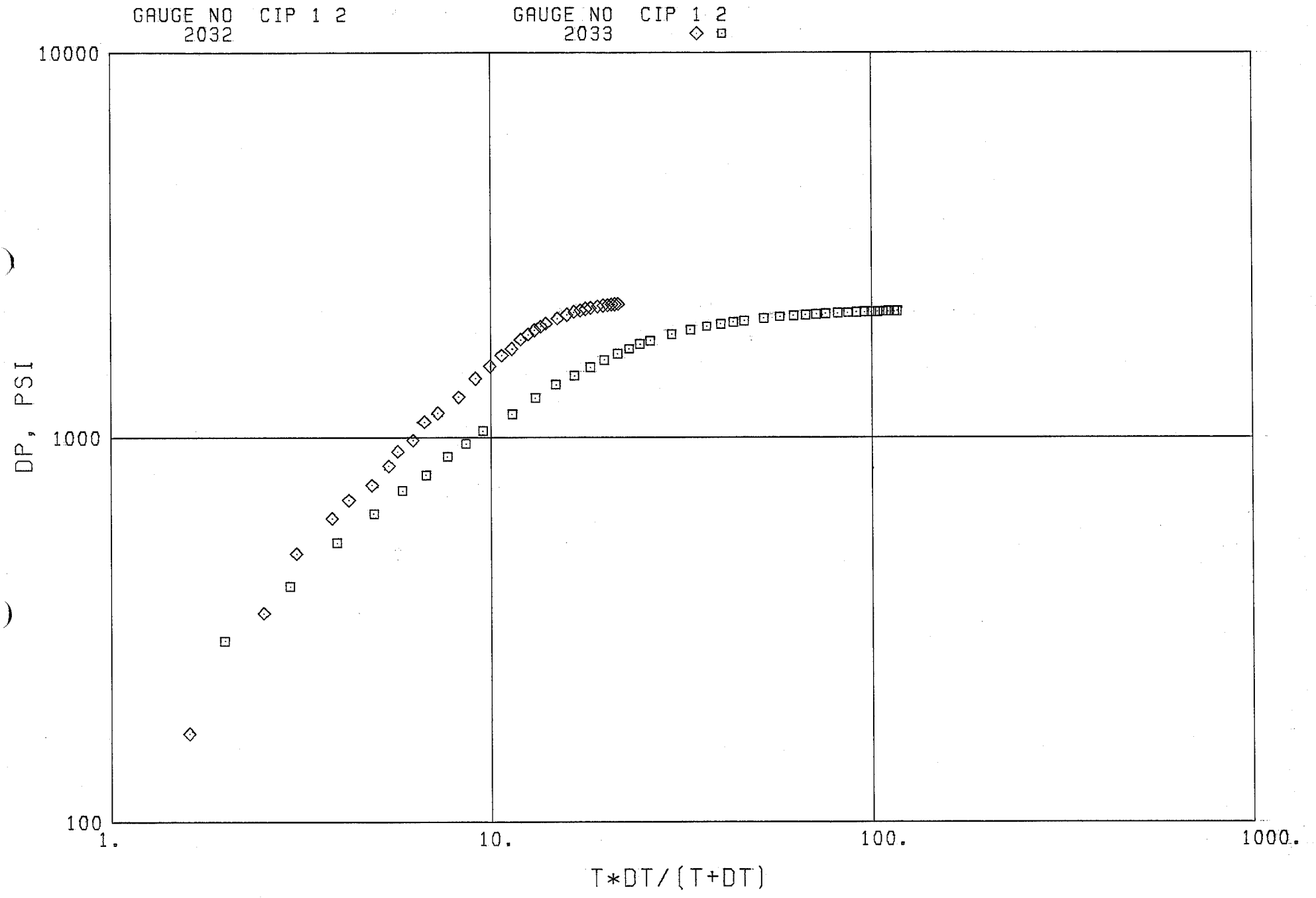

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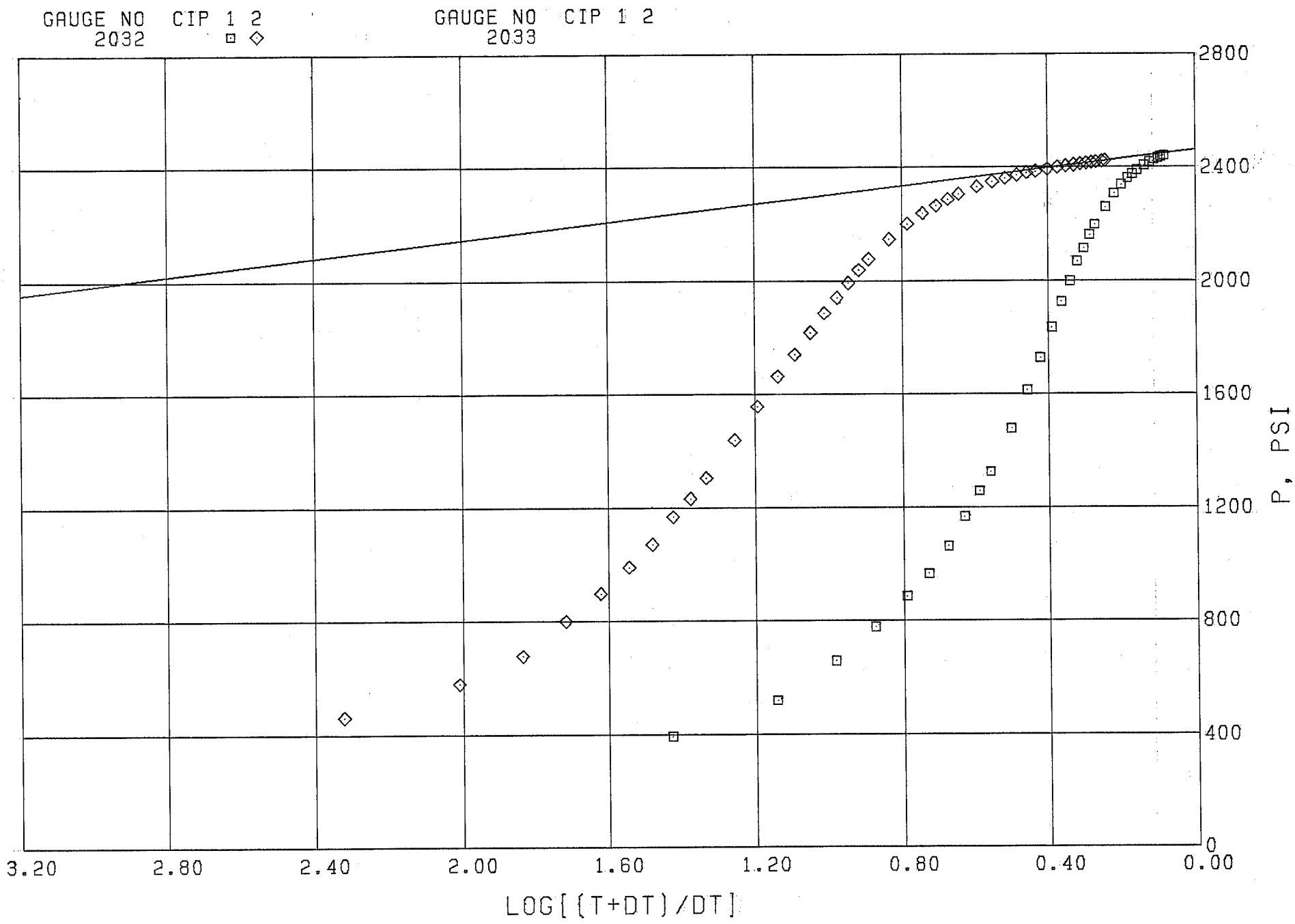

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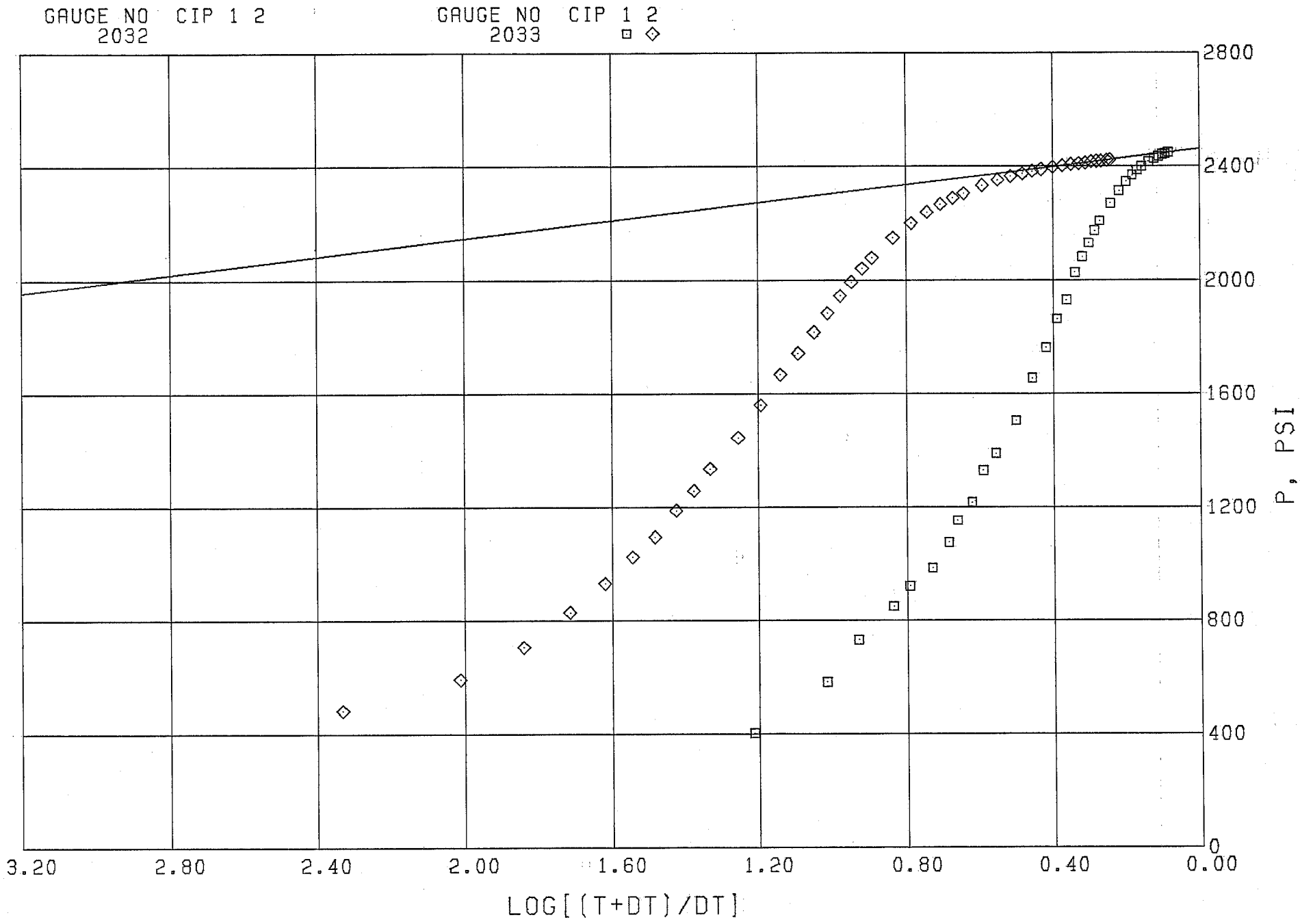

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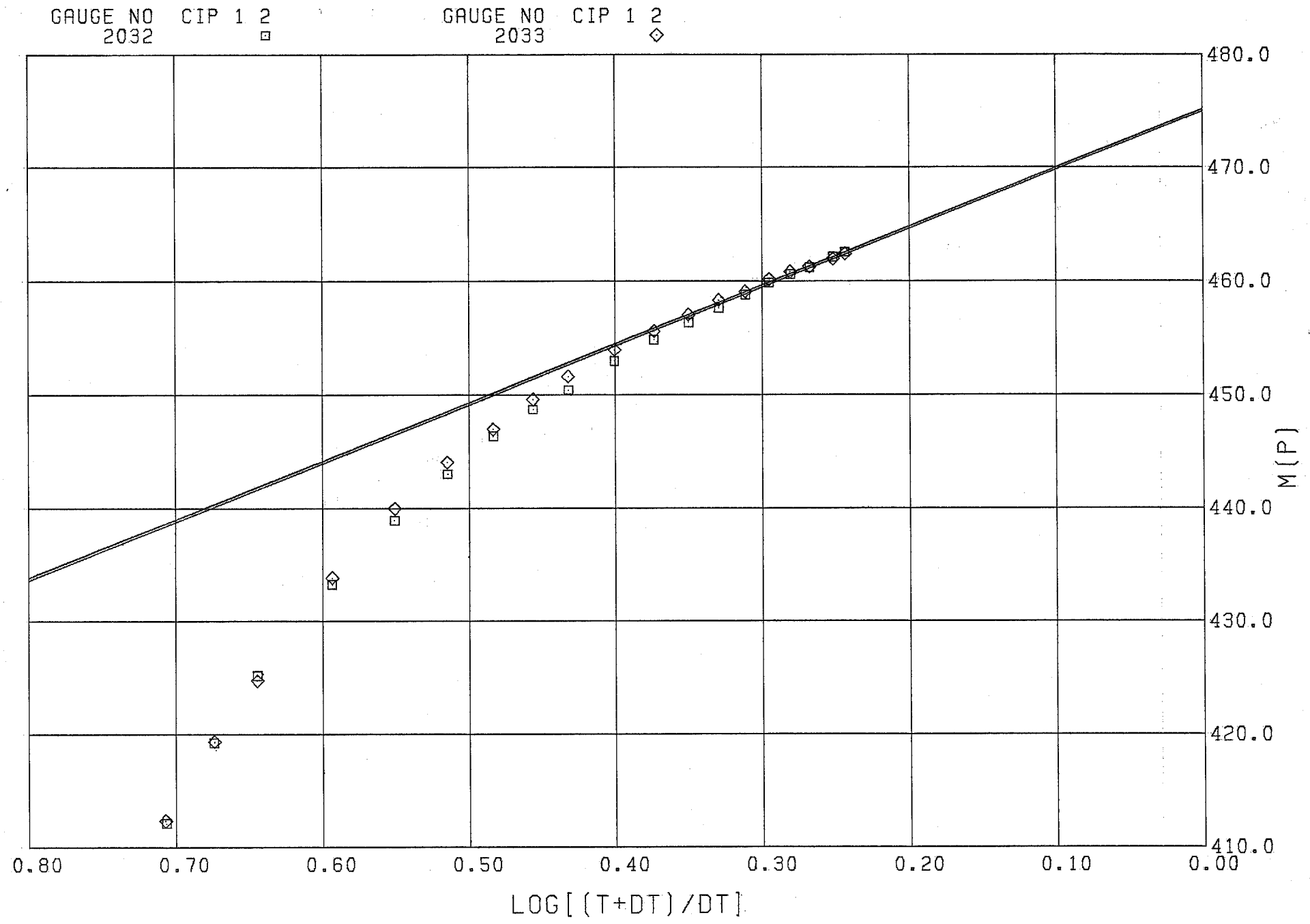
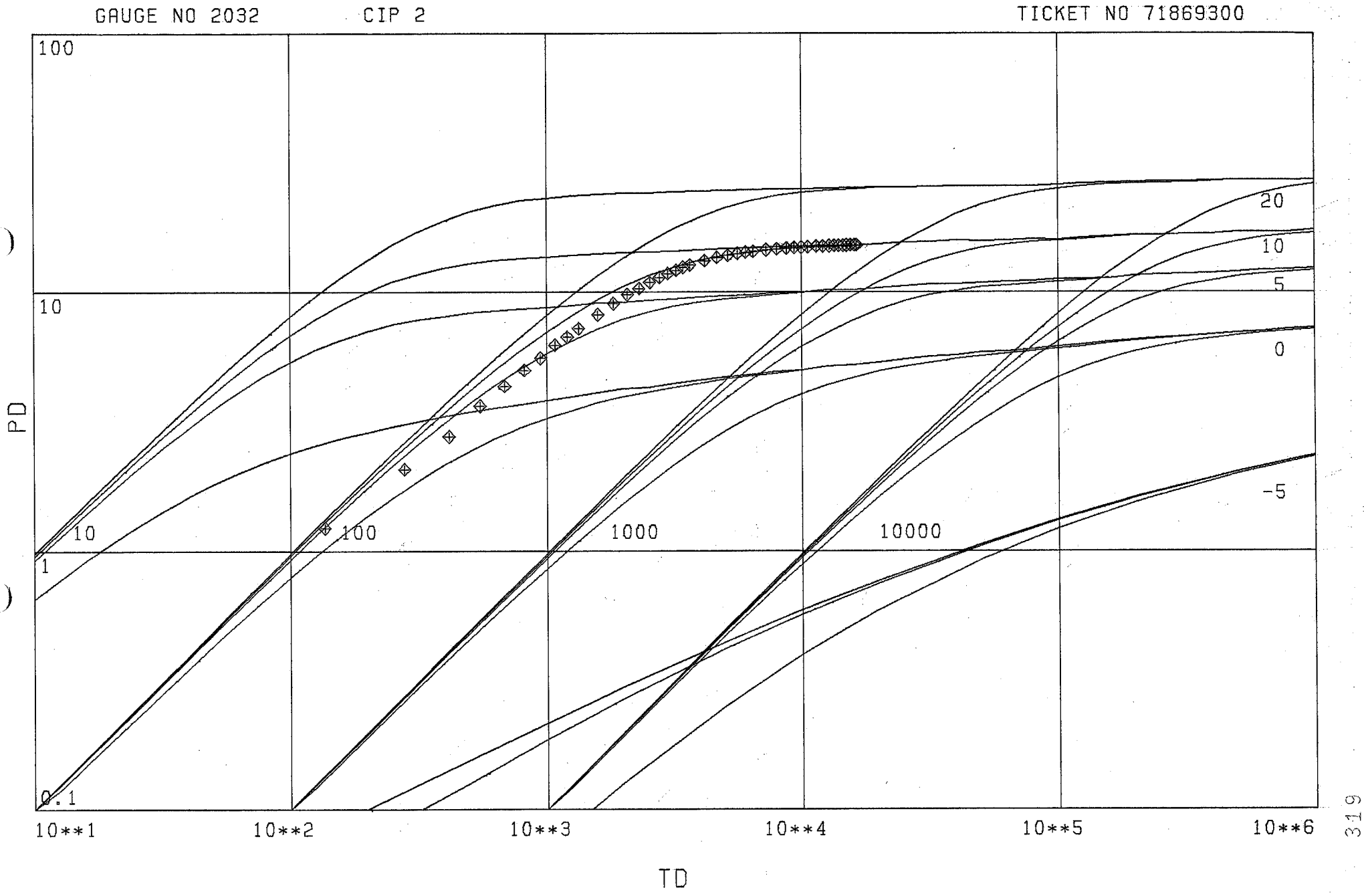
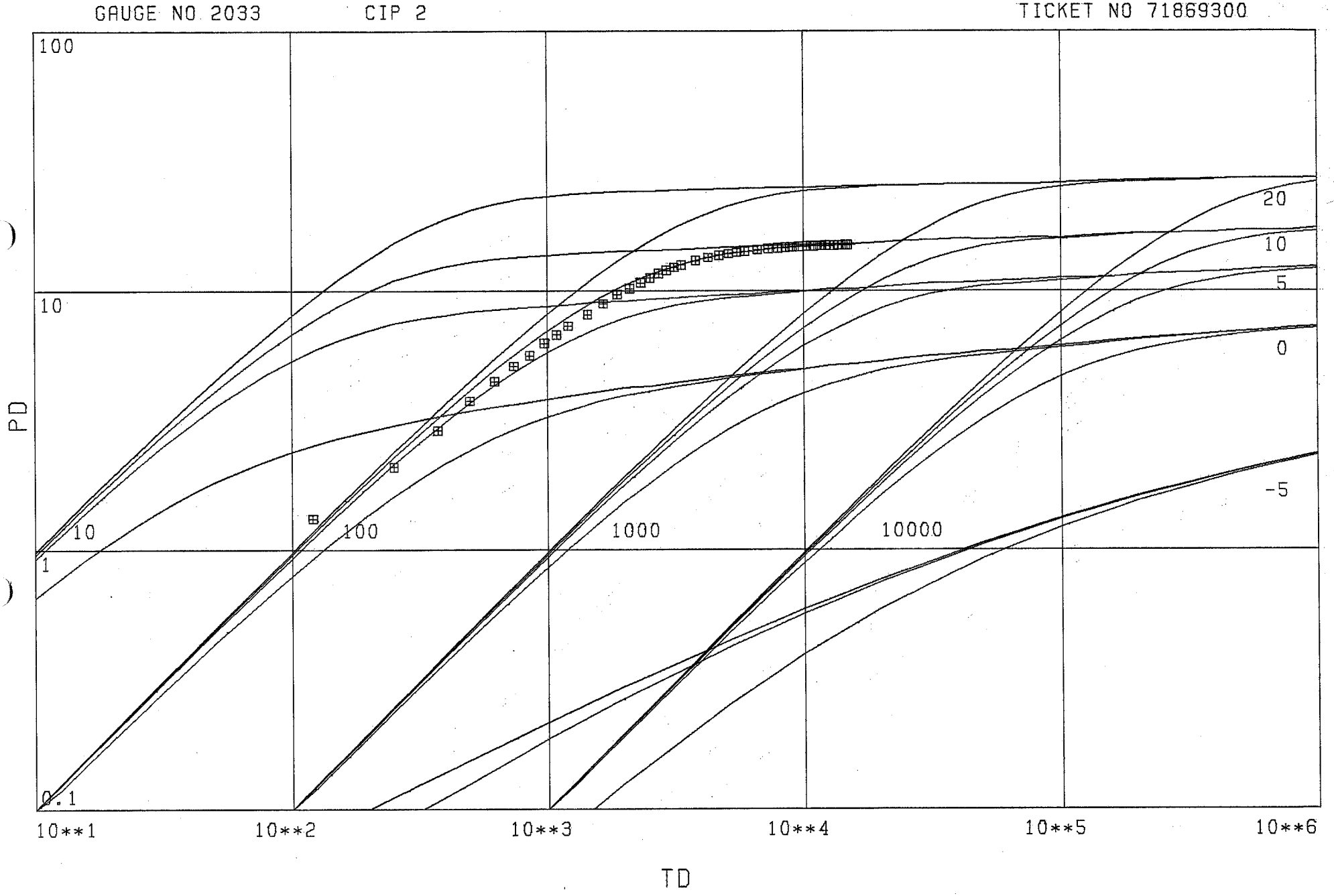



GAUGE NO 2032
CIP 2
TICKET NO 71869300
100
10
1
0.1
PD
20
10
5
0
-5
10
100
1000
10000
10**1
10**2
10**3
10**4
10**5
10**6
TD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CIP 2
TICKET NO 71869300
100
10
1
0.1
PD
20
10
5
0
-5
10
100
1000
10000
10**1
10**2
10**3
10**4
10**5
10**6
TD

SUMMARY
OF
RESERVOIR PARAMETERS
USING HORNER METHOD

GAS GRAVITY 0.700 — TEMPERATURE 128.0 °F
NET PAY 30.0 ft — POROSITY 10.0 %
RADIUS OF WELL BORE 0.365 ft — VISCOSITY 0.019 cp
GAS DEVIATION FACTOR 0.781 — GAS PROPERTIES AT 2461.5 Psig
SYSTEM COMPRESSIBILITY 0.00053976 vol/vol/psi

GAUGE NUMBER		2032	2033					
GAUGE DEPTH		5409.0	5497.0					
FLOW AND CIP PERIOD		2	2					UNITS
FINAL FLOW PRESSURE		289.1	295.6					Psig
TOTAL FLOW TIME		204.4	204.4					min
CALC. STATIC PRESSURE	P*	2460.1	2460.6					Psig
EXTRAPOLATED PRESSURE	m(P*)	475.0	475.2					$\frac{mmpsi^2}{cp}$
ONE CYCLE PRESSURE	$m(P_{10})$	423.2	423.4					$\frac{mmpsi^2}{cp}$
PRODUCTION RATE	Q	188.0	188.0					MCFD
FLOW CAPACITY	kh	3.49541	3.49911					md-ft
PERMEABILITY	k	0.11651	0.11664					md
SKIN FACTOR	S	6.7	6.7					
DAMAGE RATIO	DR	2.80	2.80					
INDICATED RATE MAX	AOF_1	191.4	191.5					MCFD
INDICATED RATE MIN	AOF_2	189.7	189.7					MCFD
THEORETICAL RATE	$DR \times AOF_1$	535.0	535.7					MCFD
THEORETICAL RATE	$DR \times AOF_2$	530.3	530.7					MCFD
RADIUS OF INVESTIGATION	r_i	19.9	19.9					ft

REMARKS:

THESE CALCULATIONS ARE BASED ON 100% GAS PRODUCTION, YIELDING EFFECTIVE PERMEABILITY TO GAS.

THE INITIAL CIP DATA WAS NOT USED FOR CALCULATIONS DUE TO INSUFFICIENT BUILD-UP OF THE CLOSED-IN PRESSURES, AS SHOWN BY THE LOG-LOG PLOTS.

THE RATE SHOWN WAS THE STABILIZED GAS FLOW RATE AT SURFACE AT THE END OF THE FINAL FLOW PERIOD.

TICKET NUMBER 71869300

SUMMARY
OF
RESERVOIR PARAMETERS
USING CURVE MATCH METHOD

GAS GRAVITY 0.700 — TEMPERATURE 128.0 °F
NET PAY 30.0 ft — POROSITY 10.0 %
RADIUS OF WELLBORE 0.365 ft — VISCOSITY 0.019 cp
GAS DEVIATION FACTOR 0.781 — GAS PROPERTIES AT 2461.5 Psig
SYSTEM COMPRESSIBILITY 0.00053977 vol/vol/psi

GAUGE NUMBER		2032	2033					
GAUGE DEPTH		5409.0	5497.0					
FLOW AND CIP PERIOD		2	2					UNITS
FINAL FLOW PRESSURE	P_f	289.1	295.6					Psig
TOTAL FLOW TIME	t	204.4	204.4					min
PRODUCTION RATE	Q	188.0	188.0					MCFD
t_d AT 1 HOUR		6496.	5869.					
P_d AT 100 psi		0.711	0.705					
C_d		2.9	2.6					
SKIN	S	10.0	10.0					
TRANSMISSIBILITY	kh/μ	177.489	175.846					$\frac{md-ft}{cp}$
FLOW CAPACITY	kh	3.38900	3.35764					md-ft
PERMEABILITY	k	0.11297	0.11192					md
DAMAGE RATIO	DR	3.71	3.72					
RADIUS OF INVESTIGATION	r_i	19.6	19.5					ft

REMARKS:

THE FINAL CIP DATA MATCHED FAIRLY WELL ON THE RADIAL FLOW TYPE CURVES ON A SKIN VALUE OF 10.0. THIS MATCH YIELDED THE RESULTS ABOVE, WHICH COMPARE WELL WITH THE HORNER RESULTS.

THESE CALCULATIONS ARE BASED ON 100% GAS PRODUCTION.

TIC T NUMBER 71869300

SUMMARY OF RESERVOIR PARAMETERS
USING HORNER METHOD

OIL GRAVITY 48.0 @60° | WATER % SALT 0.0
GAS GRAVITY 0.700 | FLUID GRADIENT 0.3416 psi/ft
GAS/OIL RATIO 132.1 cu.ft/bbl | FORMATION VOL FACTOR 1.103 vol/vol
TEMPERATURE 128.0 °F | FLUID PROPERTIES AT 2461.5 Psig
VISCOSITY 1.317 cp | NET PAY 30.0 ft
PIPE CAPACITY FACTOR(S) 0.00492 0.01422 bbl/ft

GAUGE NUMBER		2032	2033					
GAUGE DEPTH		5499.0	5497.0					
FLOW AND CIP PERIOD		2	2					UNITS
FINAL FLOW PRESSURE	P_f	289.1	295.6					Psig
TOTAL FLOW TIME	t	204.4	204.4					min
EXTRAPOLATED PRESSURE	P*	2461.2	2461.5					Psig
ONE CYCLE PRESSURE		2303.2	2304.0					Psig
PRODUCTION RATE	Q	83.3	83.3					BPD
TRANSMISSIBILITY	kh/μ	94.5474	94.8452					$\frac{md-ft}{cp}$
FLOW CAPACITY	kh	124.505	124.897					md-ft
PERMEABILITY	k	4.15017	4.16324					md
DAMAGE RATIO	DR	2.52	2.52					
POTENTIAL RATE	Q_i	209.6	209.7					BPD
RADIUS OF INVESTIGATION	r_i	134.9	135.1					ft

REMARKS:

THESE CALCULATIONS ARE BASED ON 100% OIL PRODUCTION. THE RATE SHOWN WAS DETERMINED ASSUMING THE 1200 FT LIQUID RECOVERY WAS DISPLACED ENTIRELY BY OIL, OVER THE 211 MINUTES TOTAL FLOW TIME OF THE TEST.

VERY SIMILAR RESULTS WERE OBTAINED FROM THE RADIAL FLOW TYPE CURVES MATCHES OF THE FINAL CIP DATA.

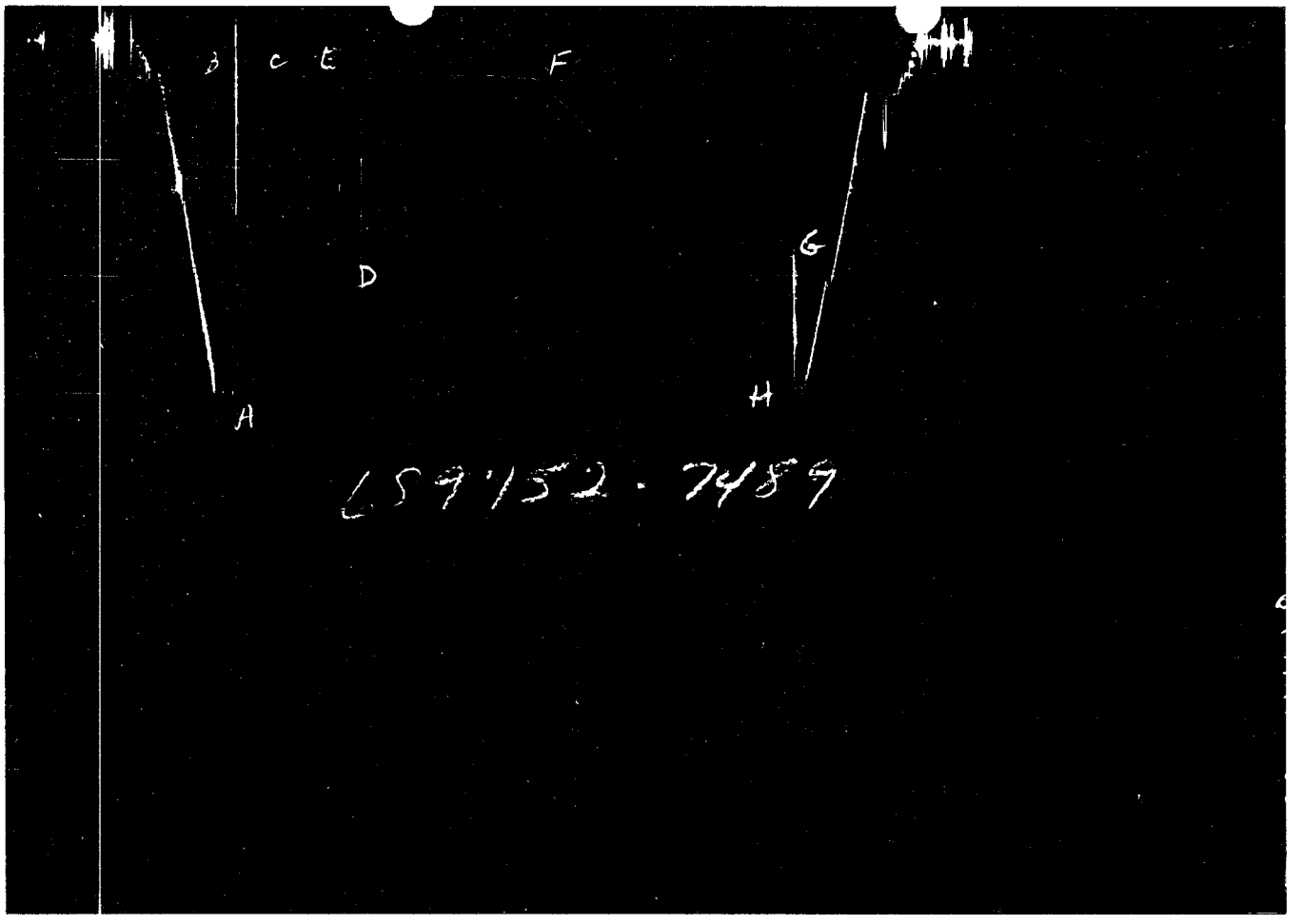
THE INITIAL CIP DATA WAS NOT USED DUE TO INSUFFICIENT BUILD-UP OF THE CLOSED-IN PRESSURES.

HALLIBURTON
SERVICES

TICKET NO. 68975200
04-SEP-84
FARMINGTON

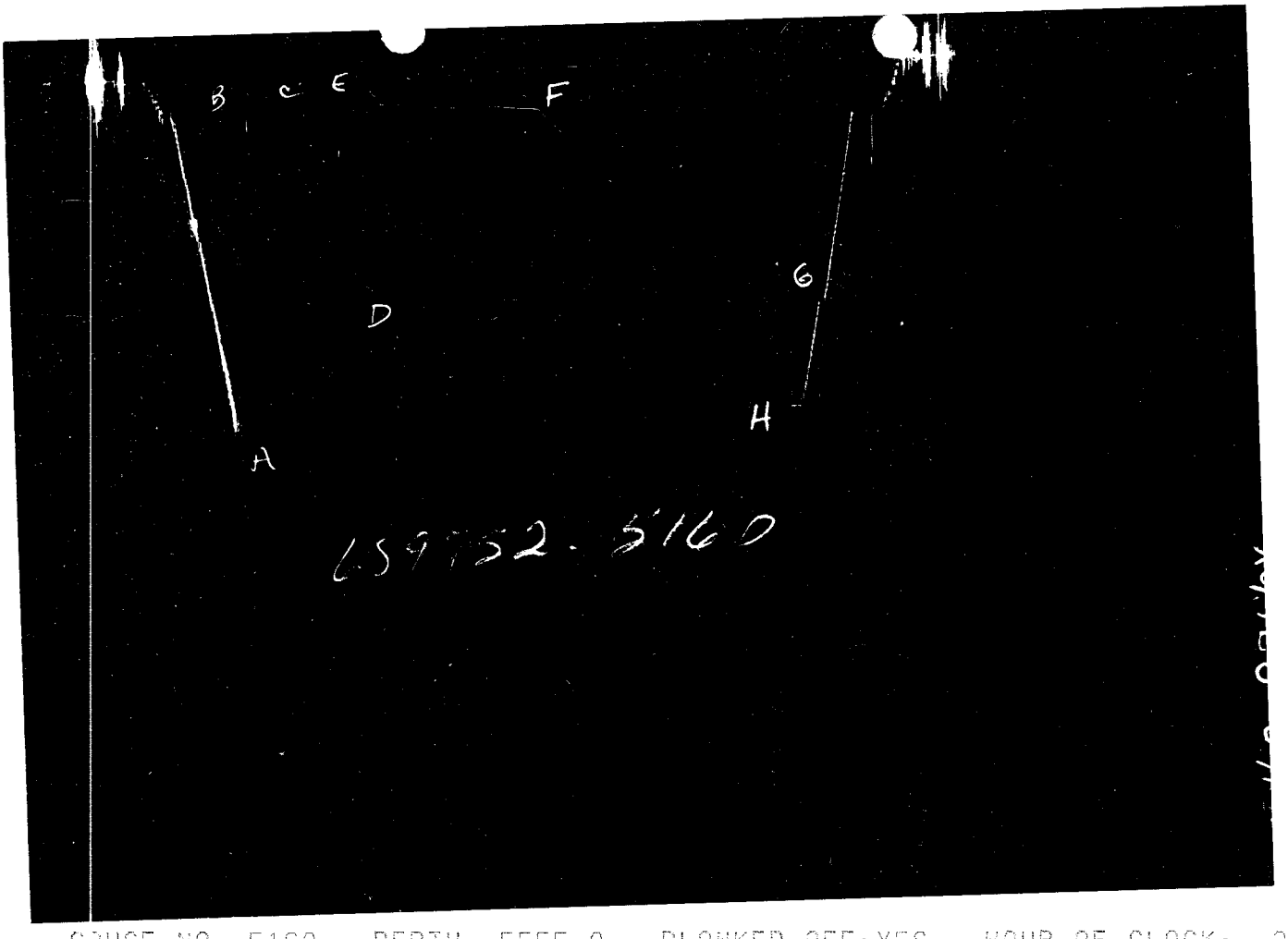
FORMATION TESTING SERVICE REPORT

PATTERSON UNIT	9	2	5498.' - 5558.'	CELSIUS ENERGY COMPANY	
LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME	
LEGAL LOCATION SEC. - TWP. - RNG.	FIELD AREA	COUNTY	STATE		
33-37S-25E	PATTERSON CANYON	SAN JUAN	UTAH	IC	



GAUGE NO: 7489 DEPTH: 5477.0 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	3025	2978.1			
B	INITIAL FIRST FLOW	64	67.9	30.0	29.9	F
C	FINAL FIRST FLOW	174	217.4			
C	INITIAL FIRST CLOSED-IN	174	217.4	120.0	119.5	C
D	FINAL FIRST CLOSED-IN	1864	1874.5			
E	INITIAL SECOND FLOW	130	150.9	210.0	211.1	F
F	FINAL SECOND FLOW	305	331.8			
F	INITIAL SECOND CLOSED-IN	305	331.8	300.0	299.5	C
G	FINAL SECOND CLOSED-IN	1821	1859.5			
H	FINAL HYDROSTATIC	2982	2971.4			



GAUGE NO: 5160 DEPTH: 5555.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2995	3015.3			
B	INITIAL FIRST FLOW	85	113.8	30.0	29.9	F
C	FINAL FIRST FLOW	171	229.3			
C	INITIAL FIRST CLOSED-IN	171	229.3	120.0	119.5	C
D	FINAL FIRST CLOSED-IN	1872	1903.5			
E	INITIAL SECOND FLOW	128	164.0	210.0	211.1	F
F	FINAL SECOND FLOW	363	361.8			
F	INITIAL SECOND CLOSED-IN	363	361.8	300.0	299.5	C
G	FINAL SECOND CLOSED-IN	1872	1888.6			
H	FINAL HYDROSTATIC	2974	3004.9			

EQUIPMENT & HOLE DATA

FORMATION TESTED: LOWER ISMAY
NET PAY (ft): 15.0
GROSS TESTED FOOTAGE: 60.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 8.750
ELEVATION (ft): 5359
TOTAL DEPTH (ft): 5558.0
PACKER DEPTH(S) (ft): 5492, 5498
FINAL SURFACE CHOKE (in):
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 10.30
MUD VISCOSITY (sec): 41
ESTIMATED HOLE TEMP. (°F):
ACTUAL HOLE TEMP. (°F): 128 @ 5554.0 ft

TICKET NUMBER: 68975200

DATE: 8-29-84 TEST NO: 2

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: FARMINGTON

TESTER: HOWARD BELL

WITNESS: HOWARD LEEPER

DRILLING CONTRACTOR: ARAPAHOE #4

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
SAMPLER	0.420 @ 80 °F	14000 ppm
BOTTOM	0.266 @ 81 °F	22000 ppm
PIT	0.660 @ 77 °F	8500 ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm

SAMPLER DATA

Psig AT SURFACE: 200
cu.ft. OF GAS: 0.14
cc OF OIL: 200
cc OF WATER: 1800
cc OF MUD: 0
TOTAL LIQUID cc: 2000

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): 46.0 @ 60°F
GAS/OIL RATIO (cu.ft. per bbl):
GAS GRAVITY:

CUSHION DATA

TYPE	AMOUNT	WEIGHT

RECOVERED:

810 FEET OF GAS AND OIL CUT MUD

MEASURED FROM TESTER VALVE

REMARKS:

CALCULATIONS COULD NOT BE PERFORMED ON THE INFORMATION FROM THIS TEST. THE LOG-LOG PLOTS OF THE CIP DATA (INCLUDED AT THE END OF THE REPORT FOR YOUR INSPECTION) INDICATES THE BUILD-UPS ARE DOMINATED BY WELLBORE STORAGE EFFECTS AND NOT APPLICABLE TO ANALYSIS.

TYPE & SIZE MEASURING DEVICE: 3/4" ADJUSTABLE CHOKE | TICKET NO: 68975200

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
8-29-84					
1515					ON LOCATION-STANDING BY
1620					PICKED UP TOOLS
1730					TRIPPED IN HOLE
1935	BH	0			OPENED TOOL WITH A WEAK BLOW
					2" IN BUCKET
1940	"	1 OZ.			FAIR BLOW-5" IN BUCKET
1945	"	2 OZ.			FAIR BLOW-9" IN BUCKET
1950	"	5#			GOOD BLOW TO BOTTOM OF BUCKET
2005	"	9.5#			CLOSED TOOL-GOOD BLOW TO BOTTOM
					OF BUCKET
2205	"	2#			OPENED TOOL WITH GOOD BLOW
2210	.125	12#			GAS TO SURFACE-FLARED TO PIT
2215	"	15.5#			FLARED TO PIT-REMAINED SAME
					UNTIL TOOL CLOSED-REMAINED ON
					.125" CHOKE
2220		17			
2235		13			
2250		15.5			
2305		15			
2320		14			
2335		13			
2350		12			
8-30-84					
0005		11			
0020		10			
0035		9.5			
0050		9			
0105		8.5			
0120		8			
0135					CLOSED TOOL
0635					OPENED BYPASS
0645					TRIPPED OUT OF HOLE
0815					REVERSED OUT
0830					SHUT DOWN
0838					TRIPPED OUT OF HOLE
1030					TOOLS OUT AND LAID DOWN

TICKET NO: 68975200

CLOCK NO: 14128 HOUR: 24

HALLIBURTON SERVICES

GAUGE NO: 7489

DEPTH: 5477.0

FIRST FLOW

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
B	1	0.0	67.9			
C	2	29.9	217.4	149.5		

FIRST CLOSED-IN

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
C	1	0.0	217.4			
	2	1.0	235.9	18.5	0.9	1.502
	3	2.0	256.8	39.4	1.9	1.208
	4	3.0	276.6	59.3	2.7	1.039
	5	4.0	297.8	80.4	3.5	0.927
	6	5.0	315.4	98.1	4.2	0.847
	7	6.0	337.6	120.3	5.0	0.778
	8	7.0	359.4	142.1	5.7	0.723
	9	8.0	379.9	162.6	6.3	0.677
	10	9.0	398.7	181.3	6.9	0.637
	11	10.0	417.6	200.3	7.5	0.602
	12	12.0	457.1	239.7	8.5	0.544
	13	14.0	495.8	278.5	9.5	0.496
	14	16.0	533.5	316.2	10.4	0.457
	15	18.0	569.1	351.7	11.2	0.426
	16	20.0	604.4	387.0	12.0	0.397
	17	22.0	637.7	420.3	12.7	0.373
	18	24.0	672.6	455.2	13.3	0.351
	19	26.0	705.9	488.5	13.9	0.332
	20	28.0	738.6	521.2	14.5	0.315
	21	30.0	769.7	552.4	15.0	0.300
	22	35.0	849.7	632.4	16.1	0.268
	23	40.0	924.2	706.9	17.1	0.243
	24	45.0	1006.1	788.7	18.0	0.221
	25	50.0	1082.8	865.5	18.7	0.204
	26	55.0	1155.1	937.7	19.4	0.189
	27	60.0	1222.3	1004.9	20.0	0.176
	28	70.0	1357.7	1140.3	20.9	0.155
	29	80.0	1496.3	1278.9	21.8	0.138
	30	90.0	1616.6	1399.2	22.4	0.125
	31	100.0	1720.2	1502.9	23.0	0.114
	32	110.0	1808.4	1591.0	23.5	0.104
D	33	119.5	1874.6	1657.2	23.9	0.097

SECOND FLOW

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
E	1	0.0	150.9			
	2	10.0	184.7	33.8		
	3	20.0	260.1	75.4		
	4	30.0	256.6	-3.5		
	5	40.0	260.4	3.7		
	6	50.0	266.7	6.3		
	7	60.0	273.2	6.5		
	8	70.0	278.4	5.2		
	9	80.0	284.5	6.1		
		SECOND FLOW - CONTINUED				
	10	90.0	290.9	6.3		
	11	100.0	295.7	4.8		
	12	110.0	299.8	4.1		
	13	120.0	300.7	0.9		
	14	130.0	298.7	-2.0		
	15	140.0	297.4	-1.3		
	16	150.0	298.3	0.9		
	17	160.0	300.5	2.2		
	18	170.0	303.7	3.3		
	19	180.0	313.1	9.4		
	20	190.0	320.5	7.4		
	21	200.0	324.2	3.7		
F	22	211.1	331.8	7.6		

SECOND CLOSED-IN

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
F	1	0.0	331.8			
	2	1.0	338.2	6.3	0.9	2.404
	3	2.0	344.0	12.2	2.0	2.085
	4	3.0	353.2	21.4	3.0	1.909
	5	4.0	360.8	29.0	3.9	1.788
	6	5.0	367.8	36.0	4.9	1.694
	7	6.0	373.7	41.8	5.8	1.615
	8	7.0	380.2	48.4	6.8	1.551
	9	8.0	387.6	55.8	7.8	1.491
	10	9.0	396.4	64.5	8.7	1.442
	11	10.0	403.6	71.7	9.6	1.400
	12	12.0	416.2	84.3	11.5	1.323
	13	14.0	431.9	100.0	13.2	1.260
	14	16.0	447.1	115.3	15.0	1.207
	15	18.0	461.3	129.5	16.8	1.157
	16	20.0	474.4	142.5	18.4	1.116
	17	22.0	490.7	158.9	20.2	1.077
	18	24.0	504.5	172.6	21.8	1.043
	19	26.0	518.6	186.8	23.5	1.011
	20	28.0	533.0	201.2	25.1	0.982
	21	30.0	547.2	215.3	26.7	0.955
	22	35.0	582.7	250.9	30.5	0.897
	23	40.0	617.6	285.7	34.3	0.847
	24	45.0	657.0	325.2	37.9	0.803
	25	50.0	693.0	361.2	41.4	0.765
	26	55.0	729.6	397.8	44.8	0.731
	27	60.0	769.7	437.9	48.1	0.700
	28	70.0	846.0	514.2	54.3	0.648
	29	80.0	925.1	593.3	60.0	0.604
	30	90.0	1007.6	675.8	65.5	0.566
	31	100.0	1086.1	754.3	70.7	0.533
	32	110.0	1155.8	823.9	75.5	0.504
	33	120.0	1224.1	892.3	80.1	0.478
	34	135.0	1316.6	984.7	86.5	0.445
	35	150.0	1401.8	1069.9	92.5	0.416
	36	165.0	1480.2	1148.4	97.9	0.391
	37	180.0	1550.1	1218.3	103.0	0.369

REMARKS:

TICKET NO: 68975200

CLOCK NO: 14128 HOUR: 24

HALLIBURTON SERVICES

GAUGE NO: 7489

DEPTH: 5477.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
	SECOND CLOSED-IN - CONTINUED				
38	195.0	1612.8	1281.0	107.8	0.349
39	210.0	1660.7	1328.9	112.2	0.332
40	225.0	1702.7	1370.9	116.4	0.316
41	240.0	1740.9	1409.1	120.3	0.302
42	255.0	1774.1	1442.3	123.9	0.289
43	270.0	1804.5	1472.7	127.3	0.277
44	285.0	1833.6	1501.8	130.6	0.266
G 45	299.5	1859.5	1527.6	133.5	0.256

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$

REMARKS:

TICKET NO: 68975200

CLOCK NO: 9756 HOUR: 24

HALLIBURTON SERVICES

GAUGE NO: 5160

DEPTH: 5555.0

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			FIRST FLOW			
B	1	0.0	113.8			
C	2	29.9	229.3	115.4		
			FIRST CLOSED-IN			
C	1	0.0	229.3			
	2	1.0	252.3	23.1	1.0	1.491
	3	2.0	274.6	45.3	1.9	1.198
	4	3.0	294.9	65.6	2.7	1.037
	5	4.0	313.5	84.2	3.5	0.929
	6	5.0	334.6	105.4	4.3	0.847
	7	6.0	356.9	127.6	5.0	0.774
	8	7.0	375.9	146.6	5.7	0.721
	9	8.0	396.0	166.7	6.3	0.674
	10	9.0	415.0	185.7	6.9	0.634
	11	10.0	433.6	204.3	7.5	0.601
	12	12.0	469.3	240.0	8.6	0.543
	13	14.0	503.1	273.8	9.5	0.496
	14	16.0	538.1	308.9	10.4	0.457
	15	18.0	569.5	340.3	11.2	0.425
	16	20.0	602.7	373.4	12.0	0.397
	17	22.0	636.4	407.2	12.7	0.373
	18	24.0	668.3	439.0	13.3	0.352
	19	26.0	702.0	472.8	13.9	0.332
	20	28.0	733.9	504.6	14.5	0.315
	21	30.0	767.5	538.2	15.0	0.300
	22	35.0	844.8	615.6	16.1	0.268
	23	40.0	927.1	697.9	17.1	0.243
	24	45.0	1007.8	778.6	18.0	0.221
	25	50.0	1085.4	856.2	18.7	0.203
	26	55.0	1163.8	934.6	19.4	0.189
	27	60.0	1240.3	1011.1	20.0	0.176
	28	70.0	1390.0	1160.7	20.9	0.155
	29	80.0	1530.3	1301.0	21.8	0.138
	30	90.0	1653.0	1423.7	22.4	0.125
	31	100.0	1758.1	1528.8	23.0	0.114
	32	110.0	1843.3	1614.0	23.5	0.104
D	33	119.5	1903.5	1674.2	23.9	0.097
			SECOND FLOW			
E	1	0.0	164.0			
	2	10.0	199.9	35.9		
	3	20.0	283.3	83.4		
	4	30.0	280.8	-2.6		
	5	40.0	286.5	5.8		
	6	50.0	292.9	6.4		
	7	60.0	300.4	7.5		
	8	70.0	306.8	6.4		
	9	80.0	313.0	6.2		

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND FLOW - CONTINUED			
	10	90.0	319.9	6.8		
	11	100.0	325.4	5.6		
	12	110.0	329.7	4.3		
	13	120.0	330.3	0.6		
	14	130.0	326.9	-3.4		
	15	140.0	326.7	-0.2		
	16	150.0	328.4	1.7		
	17	160.0	330.8	2.4		
	18	170.0	335.3	4.5		
	19	180.0	343.8	8.6		
	20	190.0	351.3	7.5		
	21	200.0	354.9	3.6		
F	22	211.1	361.8	6.8		
			SECOND CLOSED-IN			
F	1	0.0	361.8			
	2	1.0	366.9	5.1	1.0	2.385
	3	2.0	374.2	12.4	1.9	2.092
	4	3.0	382.7	20.9	3.0	1.907
	5	4.0	390.6	28.9	4.0	1.785
	6	5.0	398.8	37.0	4.9	1.693
	7	6.0	407.1	45.3	5.9	1.611
	8	7.0	415.0	53.2	6.8	1.549
	9	8.0	422.5	60.7	7.8	1.491
	10	9.0	429.8	68.0	8.7	1.443
	11	10.0	436.4	74.6	9.6	1.401
	12	12.0	451.1	89.4	11.4	1.324
	13	14.0	466.3	104.5	13.2	1.261
	14	16.0	480.0	118.2	15.0	1.207
	15	18.0	494.7	133.0	16.7	1.158
	16	20.0	510.8	149.0	18.5	1.115
	17	22.0	524.9	163.1	20.2	1.077
	18	24.0	538.8	177.0	21.8	1.043
	19	26.0	552.9	191.1	23.5	1.012
	20	28.0	568.5	206.7	25.1	0.983
	21	30.0	583.9	222.1	26.7	0.956
	22	35.0	621.1	259.3	30.6	0.897
	23	40.0	659.6	297.8	34.3	0.847
	24	45.0	697.4	335.6	37.9	0.803
	25	50.0	734.2	372.4	41.4	0.765
	26	55.0	772.0	410.2	44.8	0.731
	27	60.0	810.3	448.5	48.0	0.701
	28	70.0	888.1	526.3	54.3	0.647
	29	80.0	964.2	602.4	60.0	0.604
	30	90.0	1040.1	678.4	65.5	0.566
	31	100.0	1113.7	751.9	70.7	0.533
	32	110.0	1186.0	824.2	75.5	0.504
	33	120.0	1253.6	891.8	80.1	0.478
	34	135.0	1352.8	991.0	86.5	0.445
	35	150.0	1438.0	1076.2	92.5	0.416
	36	165.0	1516.8	1155.1	98.0	0.391
	37	180.0	1584.3	1222.5	103.0	0.369

REMARKS:

TICKET NO: 68975200	GAUGE NO: 5160
CLOCK NO: 9756 HOUR: 24	DEPTH: 5555.0

HALLIBURTON SERVICES

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
	SECOND CLOSED-IN - CONTINUED				
38	195.0	1641.9	1280.1	107.8	0.349
39	210.0	1690.2	1328.5	112.2	0.332
40	225.0	1734.7	1373.0	116.4	0.316
41	240.0	1772.9	1411.1	120.3	0.302
42	255.0	1807.0	1445.2	123.9	0.289
43	270.0	1837.8	1476.0	127.3	0.277
44	285.0	1865.3	1503.5	130.6	0.266
G 45	299.5	1888.6	1526.9	133.5	0.256

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$

REMARKS:

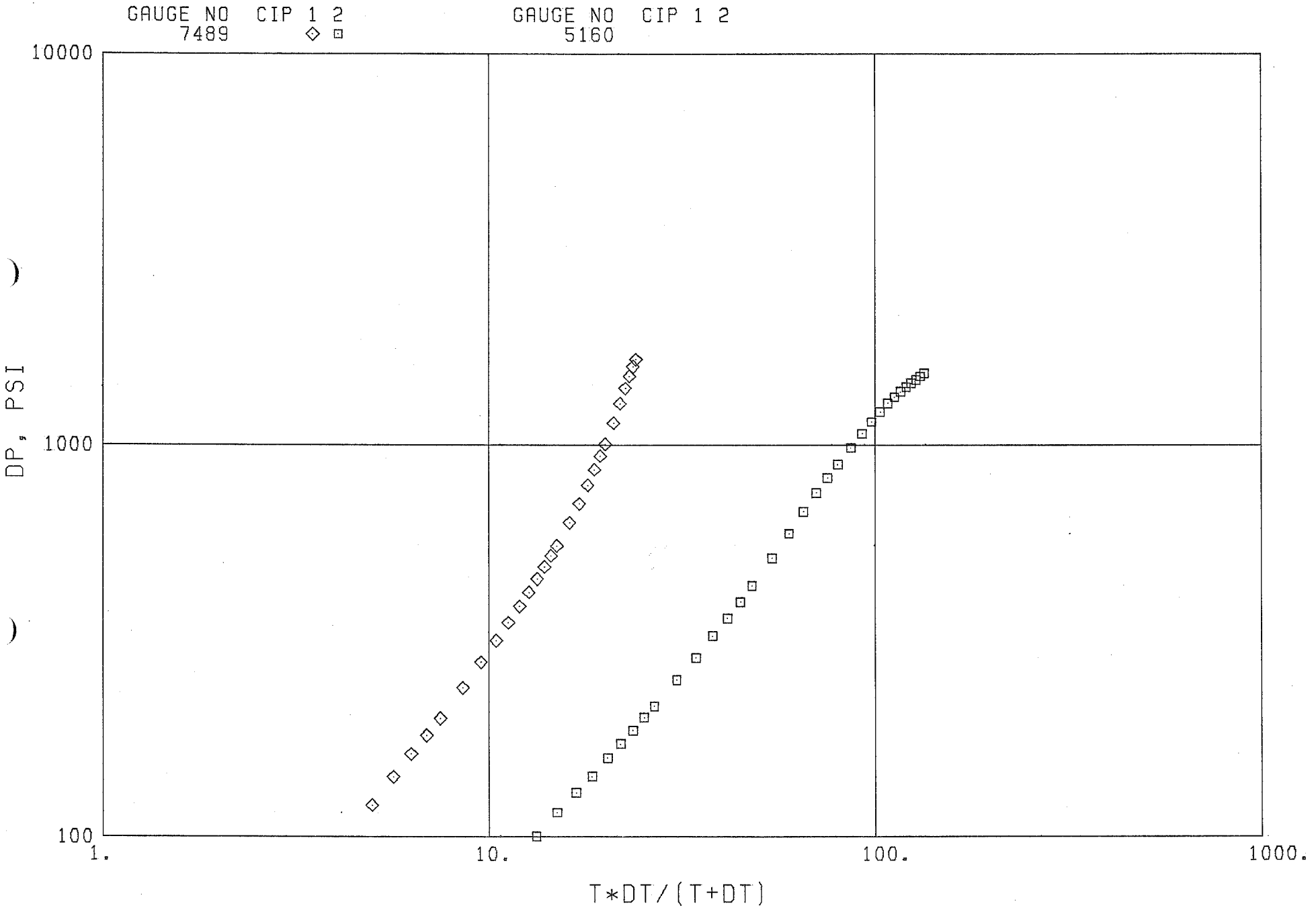
TICKET NO. 68975200

		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	4944.0	
3	DRILL COLLARS.....	6.250	2.250	429.3	
50	IMPACT REVERSING SUB.....	6.000	3.000	1.0	5373.0
3	DRILL COLLARS.....	6.250	2.250	90.0	
5	CROSSOVER.....	6.000	3.000	1.0	
13	DUAL CIP SAMPLER.....	5.030	0.750	7.0	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	5475.0
80	AP RUNNING CASE.....	5.000	2.250	4.0	5477.0
15	JAR.....	5.030	1.750	5.0	
16	VR SAFETY JOINT.....	5.000	1.000	3.0	
70	OPEN HOLE PACKER.....	7.750	1.530	6.0	5492.0
70	OPEN HOLE PACKER.....	7.750	1.530	6.0	5498.0
5	CROSSOVER.....	6.000	3.000	1.0	
3	DRILL COLLARS.....	6.250	2.250	30.7	
5	CROSSOVER.....	6.000	3.000	1.0	
20	FLUSH JOINT ANCHOR.....	5.750	3.000	21.0	
81	BLANKED-OFF RUNNING CASE.....	5.750		4.0	5555.0

TOTAL DEPTH 5558.0

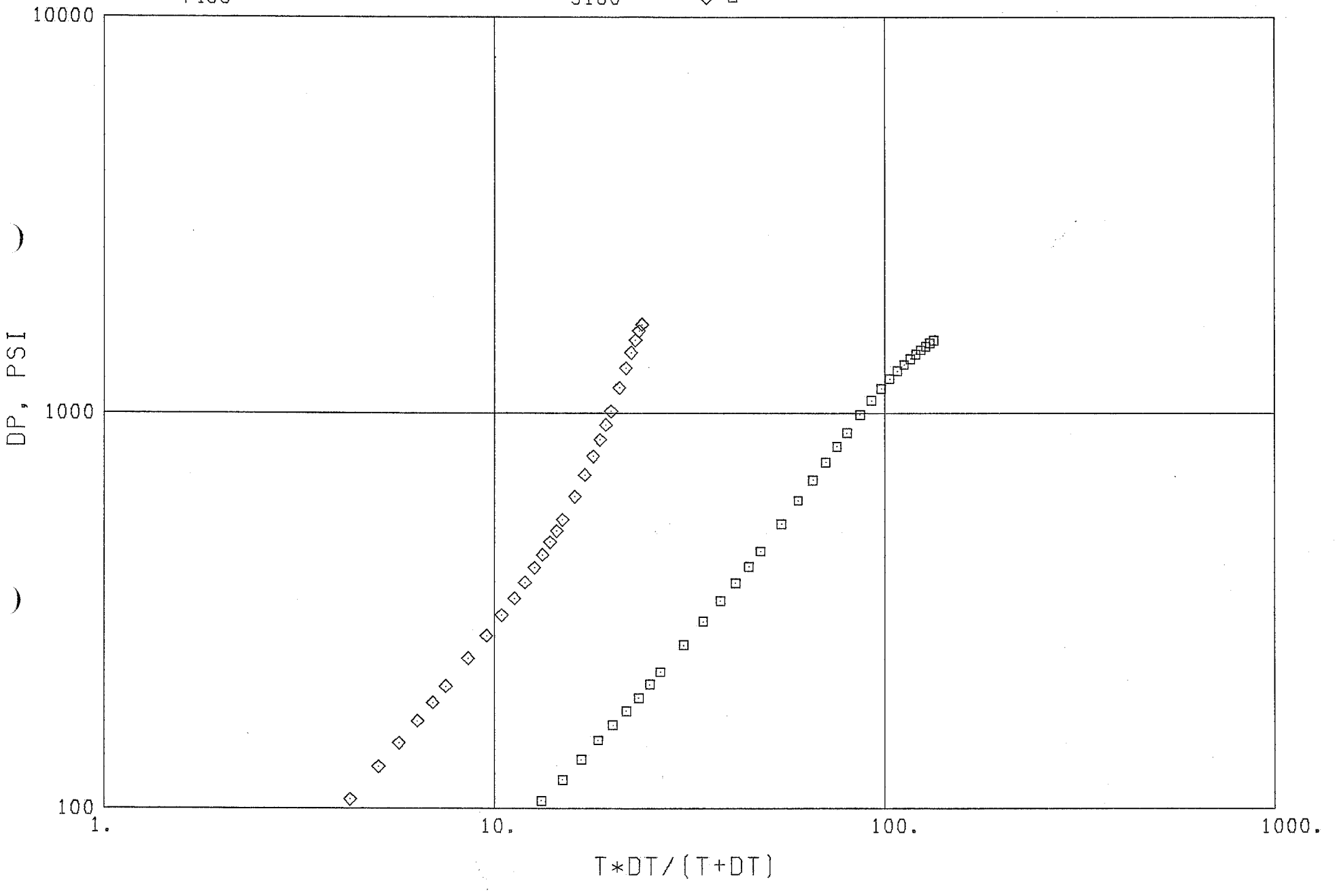
EQUIPMENT DATA

TICKET NO 68975200



673

TICKET NO 68975200



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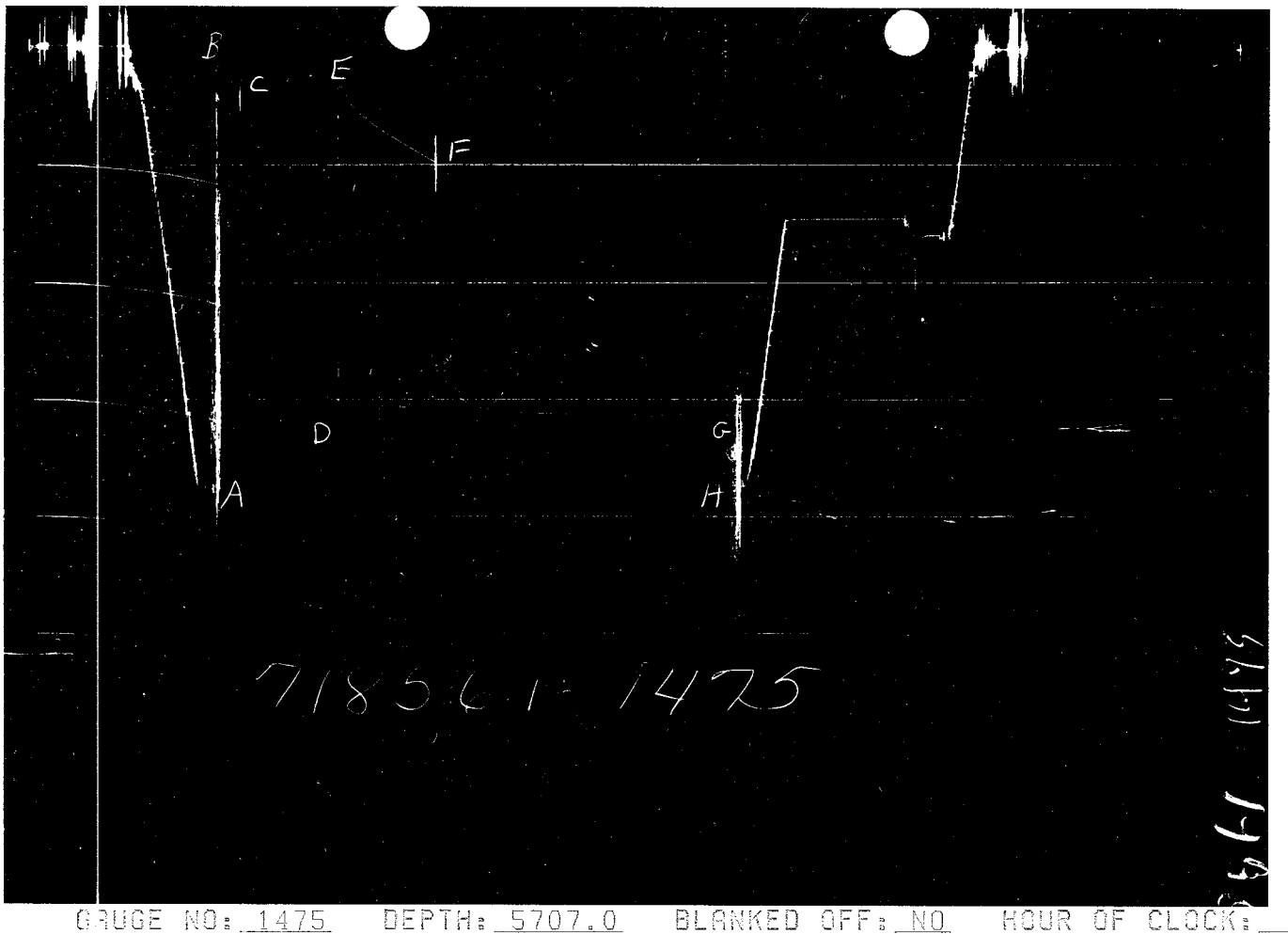
HALLIBURTON
SERVICES

TICKET NO. 71856100
07-SEP-84
FARMINGTON

FORMATION TESTING SERVICE REPORT

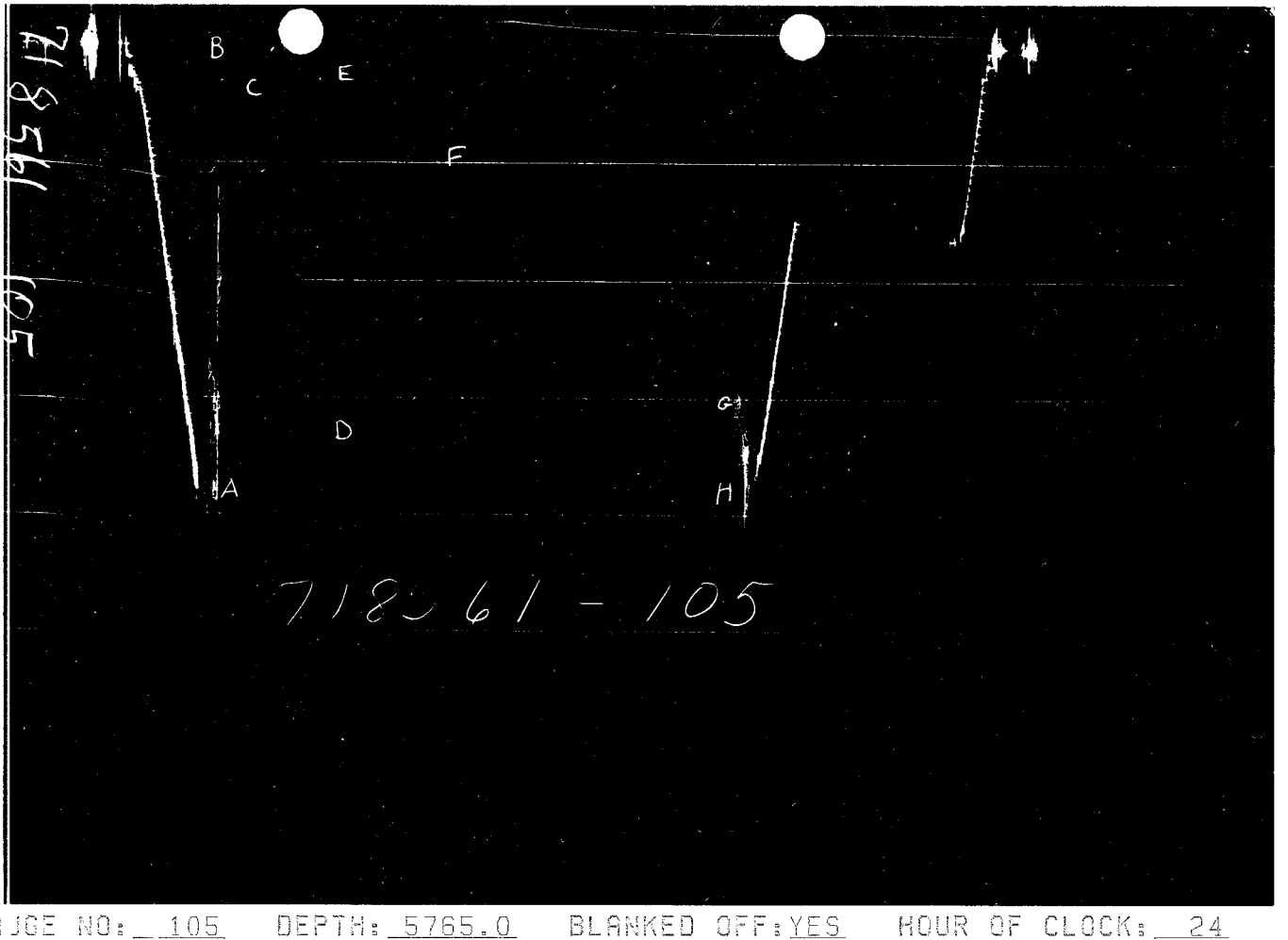
LEGAL LOCATION SEC. - TWP. - RNG.	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME
33-37S-25E	9	3	5728.' - 5768.'	CELSIUS ENERGY COMPANY

LEASE NAME	FIELD AREA	COUNTY	STATE
PATTERSON UNIT	PATTERSON UNIT	SAN JUAN	UTAH SM



GAUGE NO: 1475 DEPTH: 5707.0 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	3891	3752.8			
B	INITIAL FIRST FLOW	147	161.1	30.0	26.9	F
C	FINAL FIRST FLOW	440	435.2			
C	INITIAL FIRST CLOSED-IN	440	435.2	120.0	121.6	C
D	FINAL FIRST CLOSED-IN	3133	3133.3			
E	INITIAL SECOND FLOW	356	347.5	120.0	119.6	F
F	FINAL SECOND FLOW	985	976.0			
F	INITIAL SECOND CLOSED-IN	985	976.0	367.0	369.9	C
G	FINAL SECOND CLOSED-IN	3133	3122.0			
H	FINAL HYDROSTATIC	3764	3738.7			



GAUGE NO: 105 DEPTH: 5765.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	3884	3780.1			
B	INITIAL FIRST FLOW	190	197.0	30.0	26.9	F
C	FINAL FIRST FLOW	444	448.7			
C	INITIAL FIRST CLOSED-IN	444	448.7	120.0	121.6	C
D	FINAL FIRST CLOSED-IN	3144	3158.3			
E	INITIAL SECOND FLOW	360	366.9	120.0	119.6	F
F	FINAL SECOND FLOW	994	1001.2			
F	INITIAL SECOND CLOSED-IN	994	1001.2	367.0	368.9	C
G	FINAL SECOND CLOSED-IN	3144	3150.0			
H	FINAL HYDROSTATIC	3757	3769.5			

EQUIPMENT & HOLE DATA

FORMATION TESTED: DESERT CREEK
NET PAY (ft): 17.0
GROSS TESTED FOOTAGE: 40.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 8.750
ELEVATION (ft): 5355
TOTAL DEPTH (ft): 5768.0
PACKER DEPTH(S) (ft): 5722, 5728
FINAL SURFACE CHOKE (in): 0.250
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 12.50
MUD VISCOSITY (sec): 39
ESTIMATED HOLE TEMP. (°F):
ACTUAL HOLE TEMP. (°F): 133 @ 5764.0 ft

TICKET NUMBER: 71856100

DATE: 9-2-84 TEST NO: 3

TYPE DST: OPEN HOLE

HALLIBURTON CAMP: FARMINGTON

TESTER: D. AULD

WITNESS: MR. LEEPER

DRILLING CONTRACTOR: ARAPAHOE #4

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY		CHLORIDES
PIT	0.368 @ 84 °F		9000 ppm
BOTTOM	0.070 @ 81 °F		60000 ppm
SEE REMARKS	@ °F		ppm
	@ °F		ppm
	@ °F		ppm
	@ °F		ppm

SAMPLER DATA

Psig AT SURFACE: 355
cu.ft. OF GAS: 1.08
cc OF OIL: 900
cc OF WATER: 200
cc OF MUD: 0
TOTAL LIQUID cc: 1100

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): 44.3 @ 60°F
GAS/OIL RATIO (cu.ft. per bbl): 685
GAS GRAVITY:

CUSHION DATA

TYPE	AMOUNT	WEIGHT

RECOVERED:

1588 FEET OF GAS CUT OIL
1000 FEET OF WATER

MEASURED FROM TESTER VALVE

REMARKS:

TOP, MIDDLE, AND SAMPLER RECOVERIES WERE OIL.

GOR FROM THE SAMPLER WAS CALCULATED TO BE 190.5 SCF/STB.

TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 71856100

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
9-1-84					
1630					ON LOCATION
1848					PICKED UP TOOL
1935					TRIPPED IN HOLE
2201	BH				OPENED TOOL
2202	BH	32OZ.			
2203	BH	9#			
2204	BH	15#			
2205	BH	21#			
2206	BH	26.5#			
2207	BH	32#			
2208	1/4	38#			OPENED CHOKE
2209	1/4	46			
2210	1/4	52			
2211	1/4	54			
2212	1/4	57			
2213	1/4	61			
2214	1/4	65			
2215	1/4	68			
2216	1/4	72	128		GAS TO THE SURFACE
2221	1/4	88	151		
2226	1/4	104	175		
2231	1/4	110	184		TOOL CLOSED
9-2-84					
0031	BH				OPENED TOOL
0032	BH	23 OZ.			
0033	BH	34 OZ.			
0034	BH	4 #			
0035	BH	7#			
0036	BH	17#			
0037	BH	25#			
0038	BH	35			
0039	BH	39	79		OPENED CHOKE
0040	1/4	44	86		
0041	1/4	48	92		
0046	1/4	63	114		
0101	1/4	79	138		

TYPE & SIZE MEASURING DEVICE: ______ | TICKET NO: 71856100

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
0116	1/4	81	141		
0131	1/4	78	137		
0146	1/4	72	128		
0201	1/4	66	119		
0216	1/4	61	111		
0231	1/4	57	106		CLOSED TOOL
0838					OPENED BYPASS, TRIPPED OUT
					OF HOLE.
0940					SHUT DOWN, WASHED RIG AND
					REVERSED OUT.
1600					JOB COMPLETED.

TICKET NO: 71856100

CLOCK NO: 13741 HOUR: 24

HALLIBURTON SERVICES

GAUGE NO: 1475

DEPTH: 5707.0

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		FIRST FLOW				
B	1	0.0	161.1			
	2	5.0	206.4	45.3		
	3	10.0	268.2	61.9		
	4	15.0	316.5	48.2		
	5	20.0	367.9	51.4		
	6	25.0	414.2	46.3		
C	7	26.9	435.2	21.0		
		FIRST CLOSED-IN				
C	1	0.0	435.2			
	2	1.0	930.7	495.6	0.9	1.455
	3	2.0	1617.0	1181.8	1.9	1.157
	4	3.0	2055.2	1620.1	2.7	0.996
	5	4.0	2344.8	1909.6	3.5	0.885
	6	5.0	2515.6	2080.4	4.2	0.804
	7	6.0	2602.8	2167.6	4.9	0.736
	8	7.0	2678.8	2243.6	5.6	0.683
	9	8.0	2717.8	2282.6	6.2	0.637
	10	9.0	2754.4	2319.2	6.7	0.602
	11	10.0	2787.9	2352.7	7.3	0.566
	12	12.0	2841.0	2405.8	8.3	0.509
	13	14.0	2881.8	2446.6	9.2	0.465
	14	16.0	2913.6	2478.4	10.0	0.427
	15	18.0	2939.5	2504.4	10.8	0.396
	16	20.0	2962.9	2527.7	11.5	0.370
	17	25.0	3007.1	2572.0	12.9	0.317
	18	30.0	3040.0	2604.8	14.2	0.278
	19	35.0	3064.0	2628.8	15.2	0.247
	20	40.0	3079.8	2644.6	16.1	0.223
	21	45.0	3091.6	2656.4	16.8	0.203
	22	50.0	3099.8	2664.6	17.5	0.187
	23	55.0	3106.9	2671.8	18.1	0.173
	24	60.0	3112.2	2677.0	18.6	0.161
	25	70.0	3119.2	2684.0	19.4	0.141
	26	80.0	3125.1	2689.9	20.1	0.126
	27	90.0	3128.0	2692.8	20.7	0.113
	28	100.0	3130.1	2694.9	21.2	0.103
	29	110.0	3132.0	2696.8	21.6	0.095
D	30	121.6	3133.3	2698.1	22.0	0.087
		SECOND FLOW				
E	1	0.0	347.5			
	2	10.0	414.2	66.7		
	3	20.0	518.1	103.8		
	4	30.0	583.1	65.0		
	5	40.0	638.3	55.2		
	6	50.0	684.4	46.2		
	7	60.0	730.8	46.4		

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
		SECOND FLOW - CONTINUED				
	8	70.0	773.8	43.0		
	9	80.0	815.8	42.0		
	10	90.0	855.4	39.7		
	11	100.0	896.5	41.1		
	12	110.0	937.2	40.7		
F	13	119.6	976.0	38.8		
		SECOND CLOSED-IN				
F	1	0.0	976.0			
	2	1.0	1884.0	907.9	1.0	2.167
	3	2.0	2181.2	1205.2	2.0	1.863
	4	3.0	2443.3	1467.3	2.9	1.696
	5	4.0	2553.3	1577.2	3.9	1.574
	6	5.0	2607.6	1631.6	4.8	1.483
	7	6.0	2656.5	1680.5	5.8	1.404
	8	7.0	2693.0	1716.9	6.7	1.342
	9	8.0	2723.9	1747.9	7.6	1.286
	10	9.0	2746.7	1770.6	8.4	1.239
	11	10.0	2773.6	1797.6	9.4	1.193
	12	12.0	2811.6	1835.5	11.1	1.121
	13	14.0	2847.2	1871.1	12.8	1.060
	14	16.0	2875.2	1899.2	14.4	1.006
	15	18.0	2895.2	1919.2	16.0	0.960
	16	20.0	2914.8	1938.8	17.6	0.920
	17	22.0	2930.4	1954.4	19.1	0.884
	18	24.0	2944.7	1968.7	20.6	0.851
	19	26.0	2958.6	1982.6	22.1	0.822
	20	28.0	2972.5	1996.5	23.5	0.795
	21	30.0	2983.7	2007.7	24.9	0.769
	22	35.0	3009.0	2032.9	28.2	0.715
	23	40.0	3029.0	2053.0	31.4	0.669
	24	45.0	3044.8	2068.8	34.4	0.629
	25	50.0	3057.6	2081.6	37.3	0.594
	26	55.0	3068.4	2092.3	40.0	0.564
	27	60.0	3076.4	2100.4	42.6	0.537
	28	70.0	3088.4	2112.4	47.3	0.490
	29	80.0	3096.6	2120.6	51.7	0.452
	30	90.0	3102.3	2126.3	55.7	0.419
	31	100.0	3106.5	2130.5	59.4	0.392
	32	110.0	3110.3	2134.3	62.8	0.368
	33	120.0	3112.2	2136.2	66.0	0.346
	34	135.0	3114.5	2138.5	70.2	0.319
	35	150.0	3116.6	2140.6	74.1	0.296
	36	165.0	3118.5	2142.5	77.6	0.276
	37	180.0	3119.8	2143.8	80.7	0.259
	38	195.0	3120.8	2144.8	83.6	0.243
	39	210.0	3120.8	2144.8	86.3	0.230
	40	225.0	3121.9	2145.9	88.7	0.218
	41	240.0	3121.9	2145.9	90.9	0.207
	42	260.0	3121.9	2145.9	93.7	0.194
	43	280.0	3122.9	2146.9	96.1	0.183
	44	300.0	3122.9	2146.9	98.4	0.173

REMARKS:

TICKET NO: 71856100	GAUGE NO: 1475
CLOCK NO: 13741 HOUR: 24	DEPTH: 5707.0

HALLIBURTON SERVICES

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
	SECOND CLOSED-IN - CONTINUED				
45	320.0	3122.9	2146.9	100.5	0.164
46	340.0	3122.9	2146.9	102.3	0.156
47	360.0	3123.2	2147.1	104.1	0.148
G 48	368.9	3122.9	2146.9	104.8	0.145

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$

REMARKS:

TICKET NO: 71856100	GAUGE NO: 105
CLOCK NO: 7276 HOUR: 24	DEPTH: 5765.0

HALLIBURTON SERVICES

FIRST FLOW

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
B	1	0.0	197.0			
	2	5.0	254.5	57.5		
	3	10.0	292.6	38.1		
	4	15.0	336.6	44.0		
	5	20.0	384.8	48.2		
	6	25.0	429.9	45.1		
C	7	26.9	448.7	18.8		

FIRST CLOSED-IN

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
C	1	0.0	448.7			
	2	1.0	1315.1	866.4	1.0	1.436
	3	2.0	1987.9	1539.2	1.9	1.150
	4	3.0	2355.4	1906.7	2.7	1.001
	5	4.0	2487.0	2038.3	3.5	0.887
	6	5.0	2618.3	2169.6	4.2	0.803
	7	6.0	2666.8	2218.1	4.9	0.741
	8	7.0	2734.2	2285.5	5.6	0.684
	9	8.0	2772.3	2323.6	6.2	0.638
	10	9.0	2812.7	2364.0	6.7	0.602
	11	10.0	2818.0	2369.3	7.3	0.566
	12	12.0	2864.1	2415.4	8.3	0.510
	13	14.0	2902.2	2453.5	9.2	0.465
	14	16.0	2933.9	2485.2	10.0	0.428
	15	18.0	2954.4	2505.7	10.8	0.397
	16	20.0	2980.6	2531.9	11.5	0.370
	17	25.0	3025.1	2576.3	13.0	0.317
	18	30.0	3057.0	2608.3	14.2	0.278
	19	35.0	3082.2	2633.5	15.2	0.247
	20	40.0	3098.2	2649.5	16.1	0.223
	21	45.0	3111.3	2662.6	16.8	0.203
	22	50.0	3121.1	2672.4	17.5	0.187
	23	55.0	3128.9	2680.2	18.0	0.173
	24	60.0	3134.2	2685.5	18.6	0.161
	25	70.0	3143.5	2694.8	19.4	0.141
	26	80.0	3148.8	2700.1	20.1	0.126
	27	90.0	3153.0	2704.3	20.7	0.113
	28	100.0	3154.1	2705.4	21.2	0.103
	29	110.0	3157.0	2708.3	21.6	0.095
D	30	121.6	3158.3	2709.6	22.0	0.087

SECOND FLOW

REF		MINUTES	PRESSURE	ΔP
E	1	0.0	366.9	
	2	10.0	424.2	57.3
	3	20.0	530.7	106.4
	4	30.0	601.3	70.7
	5	40.0	657.6	56.3
	6	50.0	704.8	47.2
	7	60.0	751.6	46.8

SECOND FLOW - CONTINUED

REF		MINUTES	PRESSURE	ΔP
	8	70.0	794.3	42.7
	9	80.0	836.4	42.1
	10	90.0	878.7	42.3
	11	100.0	920.0	41.3
	12	110.0	960.8	40.8
F	13	119.6	1001.2	40.4

SECOND CLOSED-IN

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
F	1	0.0	1001.2			
	2	1.0	1763.6	762.4	1.0	2.172
	3	2.0	2191.2	1190.0	2.0	1.867
	4	3.0	2408.0	1406.8	2.9	1.696
	5	4.0	2550.8	1549.6	3.9	1.578
	6	5.0	2618.8	1617.6	4.8	1.484
	7	6.0	2671.2	1670.0	5.8	1.406
	8	7.0	2711.2	1710.0	6.7	1.340
	9	8.0	2736.2	1735.0	7.6	1.287
	10	9.0	2765.0	1763.8	8.5	1.236
	11	10.0	2788.0	1786.8	9.4	1.194
	12	12.0	2827.2	1826.0	11.1	1.122
	13	14.0	2857.4	1856.2	12.7	1.060
	14	16.0	2887.7	1886.5	14.4	1.007
	15	18.0	2910.5	1909.3	16.0	0.962
	16	20.0	2933.0	1931.8	17.6	0.920
	17	22.0	2949.7	1948.5	19.1	0.885
	18	24.0	2963.4	1962.2	20.6	0.851
	19	26.0	2978.7	1977.5	22.1	0.822
	20	28.0	2991.4	1990.2	23.5	0.794
	21	30.0	3002.8	2001.6	24.9	0.769
	22	35.0	3027.3	2026.1	28.3	0.714
	23	40.0	3048.5	2047.3	31.4	0.668
	24	45.0	3066.3	2065.1	34.4	0.629
	25	50.0	3079.2	2078.0	37.3	0.594
	26	55.0	3090.0	2088.8	40.0	0.564
	27	60.0	3098.2	2097.0	42.6	0.537
	28	70.0	3112.0	2110.8	47.4	0.490
	29	80.0	3121.3	2120.1	51.7	0.452
	30	90.0	3127.8	2126.6	55.7	0.419
	31	100.0	3132.1	2130.9	59.4	0.392
	32	110.0	3135.2	2134.0	62.8	0.368
	33	120.0	3138.4	2137.2	66.0	0.346
	34	135.0	3140.3	2139.1	70.2	0.319
	35	150.0	3142.6	2141.4	74.1	0.296
	36	165.0	3143.7	2142.5	77.6	0.276
	37	180.0	3144.5	2143.3	80.7	0.258
	38	195.0	3145.4	2144.2	83.6	0.243
	39	210.0	3146.5	2145.3	86.3	0.230
	40	225.0	3146.9	2145.7	88.7	0.218
	41	240.0	3147.1	2145.9	90.9	0.207
	42	260.0	3147.1	2145.9	93.7	0.194
	43	280.0	3147.9	2146.7	96.1	0.183
	44	300.0	3147.9	2146.7	98.4	0.173

REMARKS:
SLIGHT STAIR STEPPING DURING INITIAL CLOSED IN PRESSURE PERIOD.

TICKET NO: 71856100

CLOCK NO: 7276 HOUR: 24

HALLIBURTON SERVICES

GAUGE NO: 105

DEPTH: 5765.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
	SECOND CLOSED-IN - CONTINUED				
45	320.0	3148.6	2147.4	100.5	0.164
46	340.0	3148.6	2147.4	102.3	0.156
47	360.0	3149.0	2147.8	104.1	0.148
G 48	368.9	3150.0	2148.8	104.8	0.145

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$

REMARKS:
SLIGHT STAIR STEPPING DURING INITIAL CLOSED IN PRESSURE PERIOD.

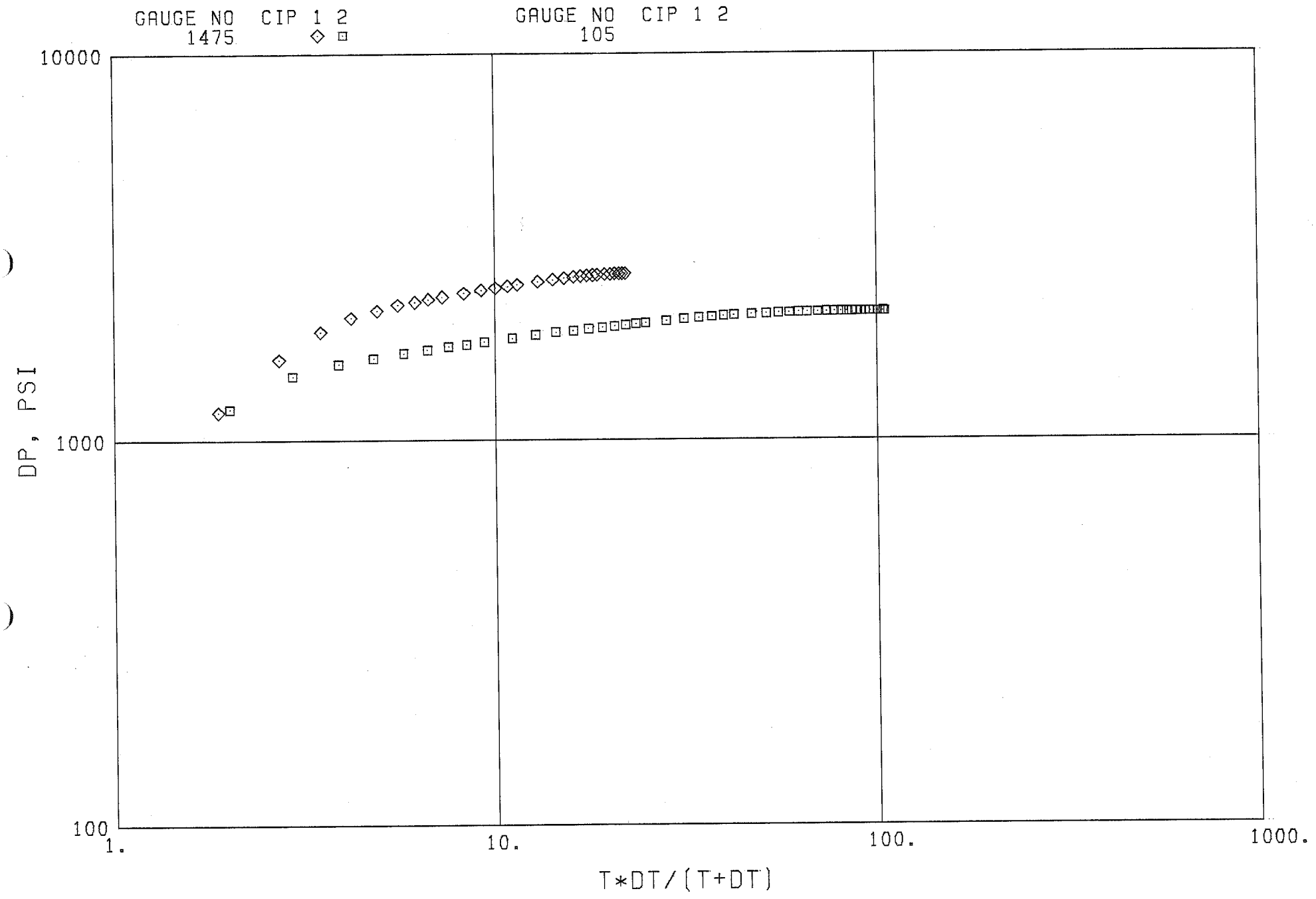
TICKET NO. 71856100

		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	4.500	3.826	5142.0	
3	DRILL COLLARS.....	6.250	2.250	458.0	
50	IMPACT REVERSING SUB.....	6.000	3.000	1.0	5600.0
3	DRILL COLLARS.....	6.250	2.250	92.0	
5	CROSSOVER.....	6.000	3.000	1.0	
13	DUAL CIP SAMPLER.....	5.000	0.870	7.0	
60	HYDROSPRING TESTER.....	5.000	0.750	5.0	5705.0
80	AP RUNNING CASE.....	5.000	2.250	4.0	5707.0
15	JAR.....	5.000	1.750	5.0	
16	VR SAFETY JOINT.....	5.000	1.000	3.0	
70	OPEN HOLE PACKER.....	7.750	1.530	6.0	5722.0
70	OPEN HOLE PACKER.....	7.750	1.530	6.0	5728.0
20	FLUSH JOINT ANCHOR.....	5.750	2.500	34.0	
81	BLANKED-OFF RUNNING CASE.....	5.750		4.0	5765.0

TOTAL DEPTH 5768.0

EQUIPMENT DATA

TICKET NO 71856100



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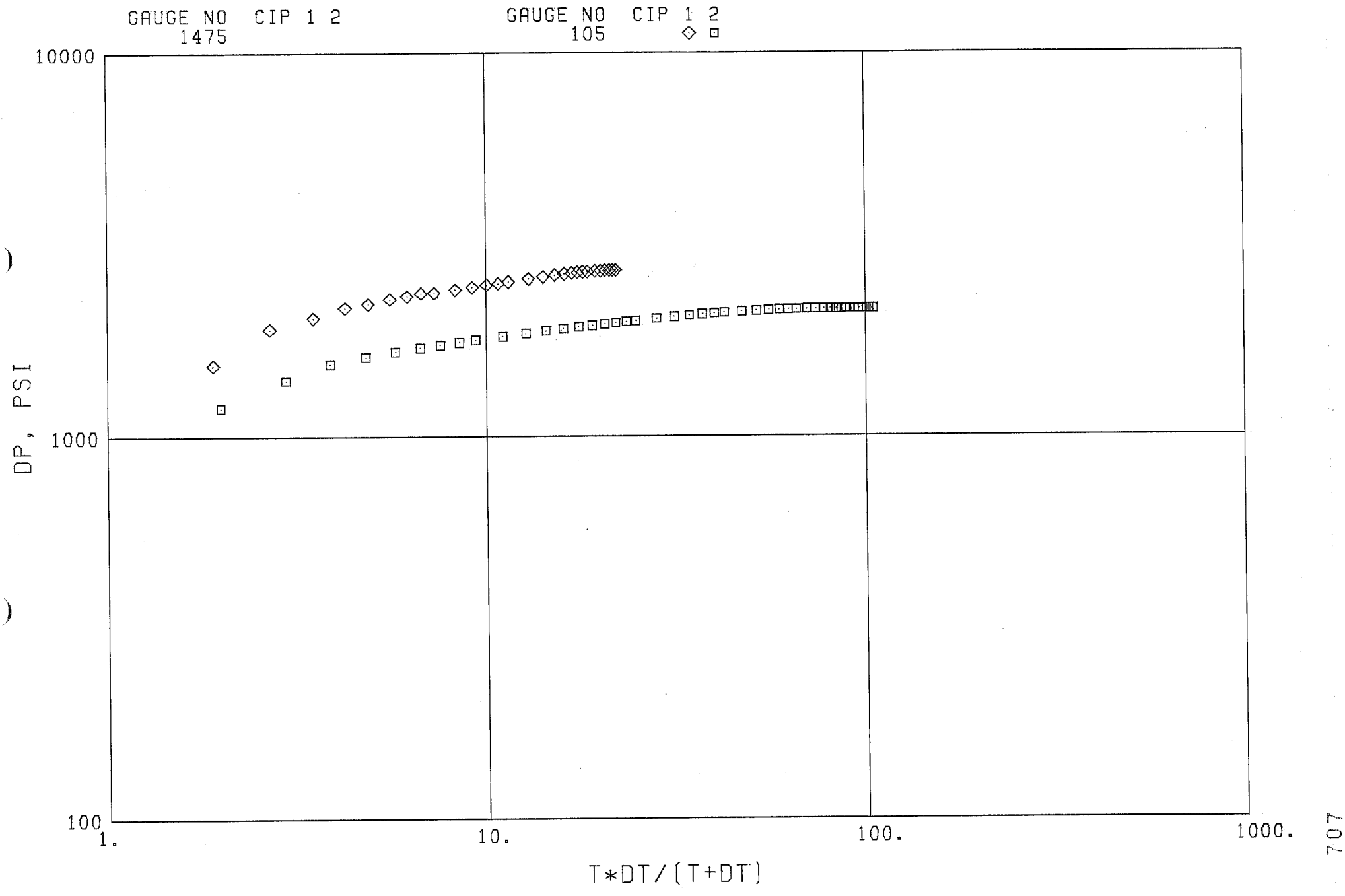

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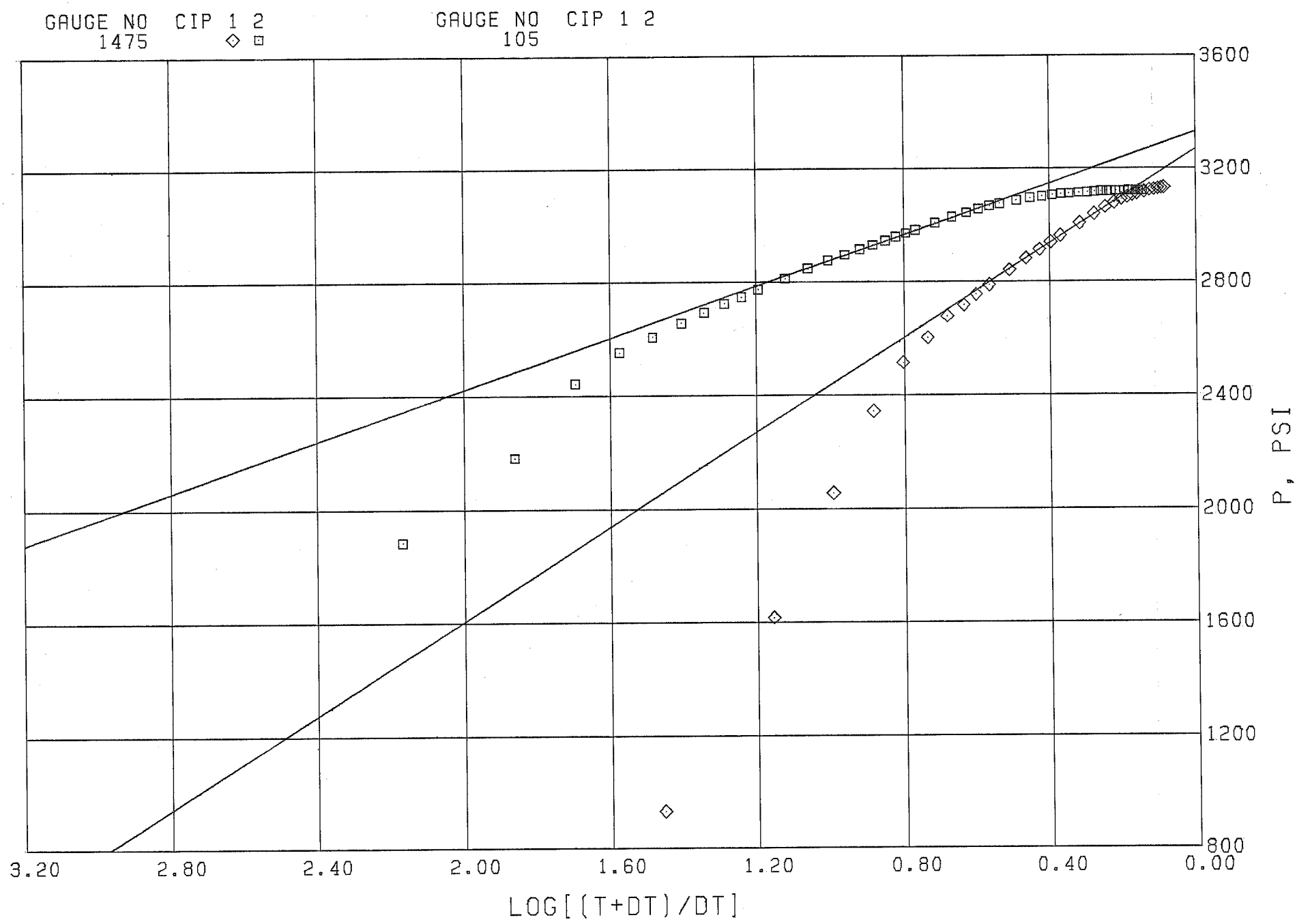
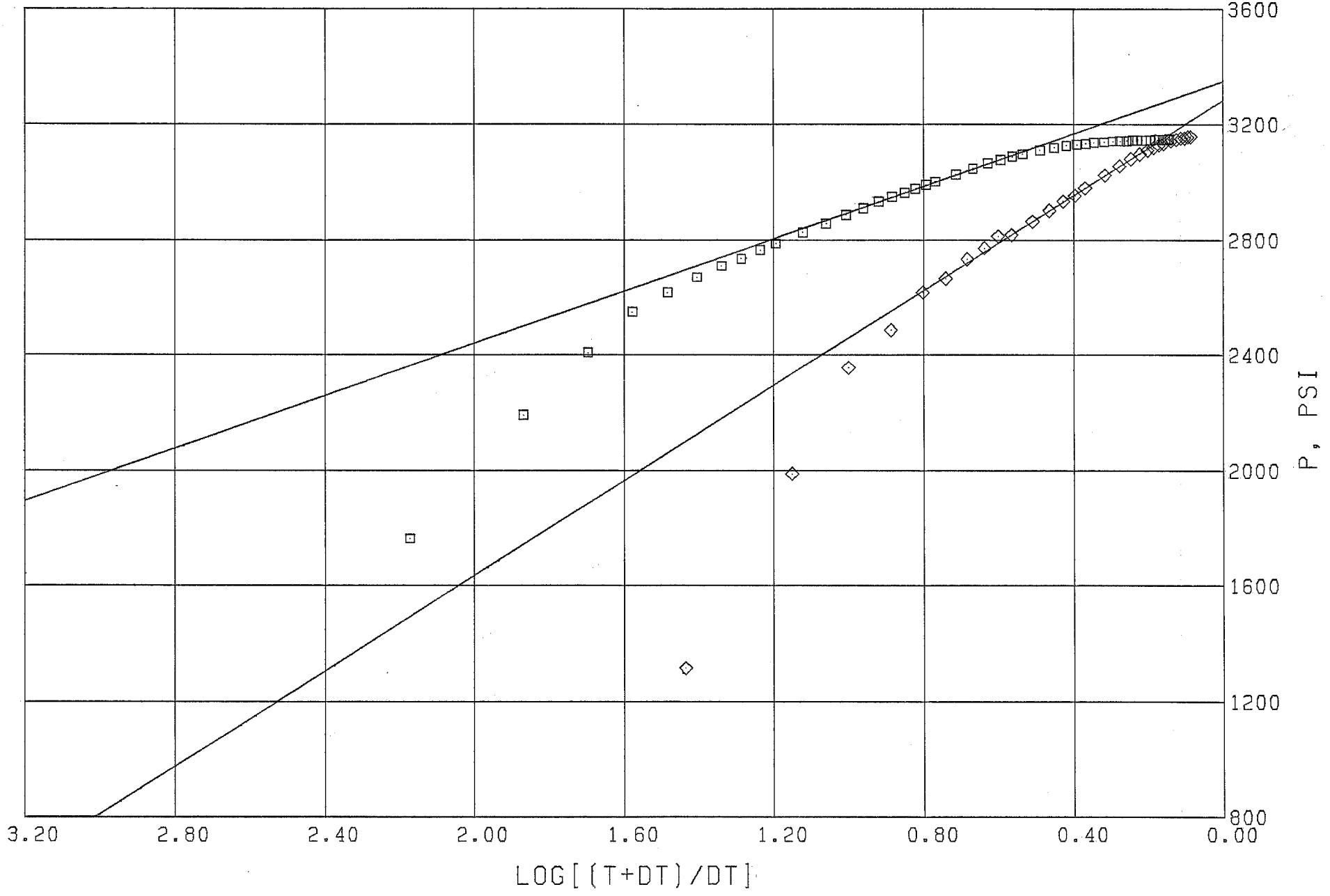


708

TICKET NO 71856100

GAUGE NO CIP 1 2
1475

GAUGE NO CIP 1 2
105 ◇ □



709

SUMMARY OF RESERVOIR PARAMETERS USING HORNER METHOD

OIL GRAVITY	44.3 @60°	WATER % SALT	6.0
GAS GRAVITY	0.700	FLUID GRADIENT	0.3887 psi/ft
GAS/OIL RATIO	685.0 cu.ft/bbl	FORMATION VOL FACTOR	1.355 vol/vol
TEMPERATURE	133.0 °F	FLUID PROPERTIES AT	3152.0 Psig
VISCOSITY	0.584 cp	NET PAY	17.0 ft
PIPE CAPACITY FACTOR(S)	0.00492		0.01422 bbl/ft

GAUGE NUMBER		1475	1475	105	105			
GAUGE DEPTH		5707.0	5707.0	5765.0	5765.0			
FLOW AND CIP PERIOD		1	2	1	2			UNITS
FINAL FLOW PRESSURE	P_f	435.2	976.0	448.7	1001.2			Psig
TOTAL FLOW TIME	t	26.9	146.4	26.9	146.4			min
EXTRAPOLATED PRESSURE	P*	3269.3	3330.0	3285.7	3351.0			Psig
ONE CYCLE PRESSURE		2438.1	2876.5	2460.3	2896.0			Psig
PRODUCTION RATE	Q	276.0	151.0	276.0	151.0			BPD
TRANSMISSIBILITY	kh/μ	73.1632	73.3627	73.6803	73.1275			$\frac{md-ft}{cp}$
FLOW CAPACITY	kh	42.7220	42.8385	43.0240	42.7012			md-ft
PERMEABILITY	k	2.51306	2.51991	2.53082	2.51184			md
DAMAGE RATIO	DR	0.62	0.95	0.63	0.95			
POTENTIAL RATE	Q_1	276.0	151.0	276.0	151.0			BPD
RADIUS OF INVESTIGATION	r_i	38.0	88.9	38.2	88.8			ft

REMARKS:

THE RESULTS SHOWN ARE EFFECTIVE TO OIL PRODUCTION. BASED ON RECOVERY, THE WELL PRODUCED 61.36% OIL TO 38.64% WATER. USING THE PRESSURE CHANGE METHOD, AVERAGE TOTAL LIQUID RATES WERE CALCULATED TO BE 450.0 B/D INITIAL AND 245.5 B/D FINAL, WHICH WERE THEN CORRECTED DOWNWARD 61.36% TO THE EFFECTIVE OIL RATES SHOWN ABOVE.

THE GOR SHOWN IS AN AVERAGE OF THE PRODUCING GOR'S AS CALCULATED FROM THE FINAL GAS FLOWING RATE FOR EACH FLOW PERIOD AS REPORTED ON THE JOB LOG AND THE OIL RATES SHOWN ABOVE.

THE EXTRAPOLATED PRESSURE VALUES SHOWN ARE NOT REPRESENTATIVE OF STATIC RESERVOIR PRESSURE, AS THE BUILD-UP'S FOR BOTH PERIODS SHOW THE FLATTENING OUT CHARACTERISTIC OF REACHING THE PSEUDOSTEADY-STEADY REGIME. THIS IS SHOWN BY THE LEVELING OUT OF THE DATA POINTS ON BOTH THE HORNER AND LOG-LOG PLOTS. TRUE STATIC PRESSURE IS ABOUT 3152 PSI.

RADIAL FLOW CURVE MATCHING GAVE SIMILAR RESULTS AS ABOVE WITH S = 0.

Form 3160-4
(November 1983)
(formerly 9-330)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

16

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: U-18452-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: --

7. UNIT AGREEMENT NAME: Patterson

8. FARM OR LEASE NAME: Unit

9. WELL NO.: 9

10. FIELD AND POOL, OR WILDCAT: Undesignated ~~Patterson Unit~~ 002

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: 33-37S-25E

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] Other

2. NAME OF OPERATOR: Wexpro Company N1070

3. ADDRESS OF OPERATOR: P. O. Box 458, Rock Springs, WY 82902

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: SE SE 615' FEL, 657' FSL
At top prod. interval reported below
At total depth

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
43-037-31023		San Juan	Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
8-11-84	9-5-84	9-13-84	GR 5341' KB 5355.06'	--

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
5813'	5701'	--	→	0-5813'	--

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: 5734'-5739' - Desert Creek DSCR

25. WAS DIRECTIONAL SURVEY MADE: No

26. TYPE ELECTRIC AND OTHER LOGS RUN: DIL, ~~BHC~~, CNL/FDC

27. WAS WELL CORED: Yes

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9-5/8	36	1614'	12-1/4	400 sx Light, 180 sx Class H	0
7	26	5813'	8-3/4	800 sx 50-50 Pozmix	0

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-7/8	5715'	--

31. PERFORATION RECORD (*Interval, size and number*)
5734'-5739' - four per foot

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5734'-5739'	3000 gallons 28% HCL

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
9-12-84	Flowing	Shut-in

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
9-13-84	22	10/64		156	316	--	2025

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
770	1800		174	345	--	1983

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*): Vented

TEST WITNESSED BY:

35. LIST OF ATTACHMENTS: DST's

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Thomas M. Walsh TITLE Director, Petroleum Eng. DATE Sept. 14, 1984

***(See Instructions and Spaces for Additional Data on Reverse Side)**

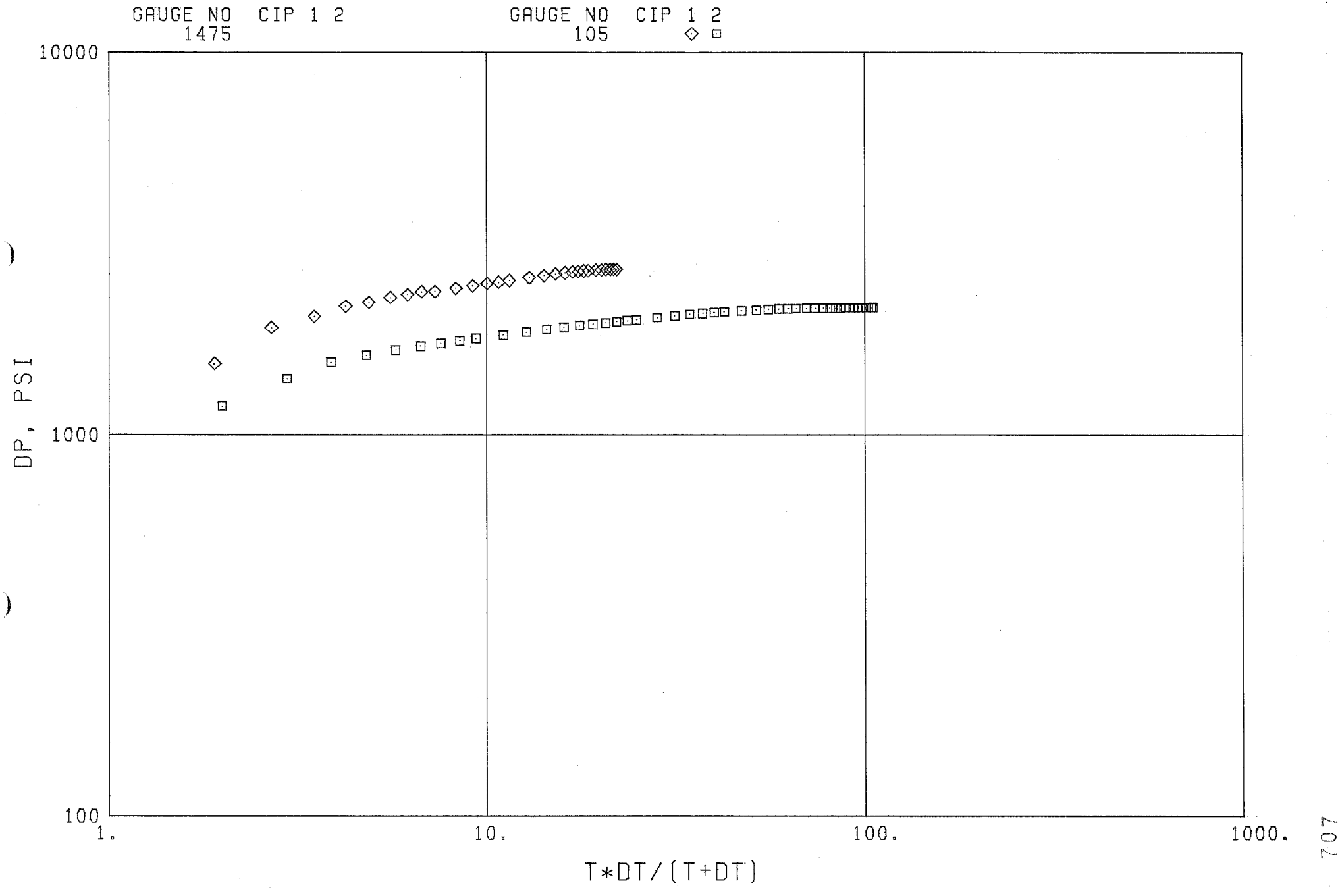
37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
Morrison	Surface	
Entrada	600	
Carmel	762	
Navajo	790	
Chinle	1,618	
Shinarump	2,315	
Cutler	2,460	
Honaker Trail	4,357	
Paradox	4,885	
Ismay	5,433	
Desert Creek	5,661	
Chimney Rock	5,764	
Akah	5,786	

TICKET NO 71856100



MATERIALS CODE NO. 7520-535

CORE LABORATORIES, INC. *Petroleum Reservoir Engineering*

COMPANY CELSIUS ENERGY COMPANY FILE NO. 3803-003338

WELL PATTERSON UNIT # 9 DATE 1-SEPT-1984 ENGRS. DS;KV

FIELD WILDCAT FORMATION PARADOX ELEV. 5341 G.L.

COUNTY SAN JUAN STATE UTAH DRLG. FLD. WEM CORES

CoRes Log

CORE and RESISTIVITY EVALUATION

RESISTIVITY PARAMETERS: a = 1.0 m = 2.0 n = 2.0 . Depths 5440 to 5560 .
a = 1.0 m = 2.0 n = 2.0 . Depths 5708 to 5768 .

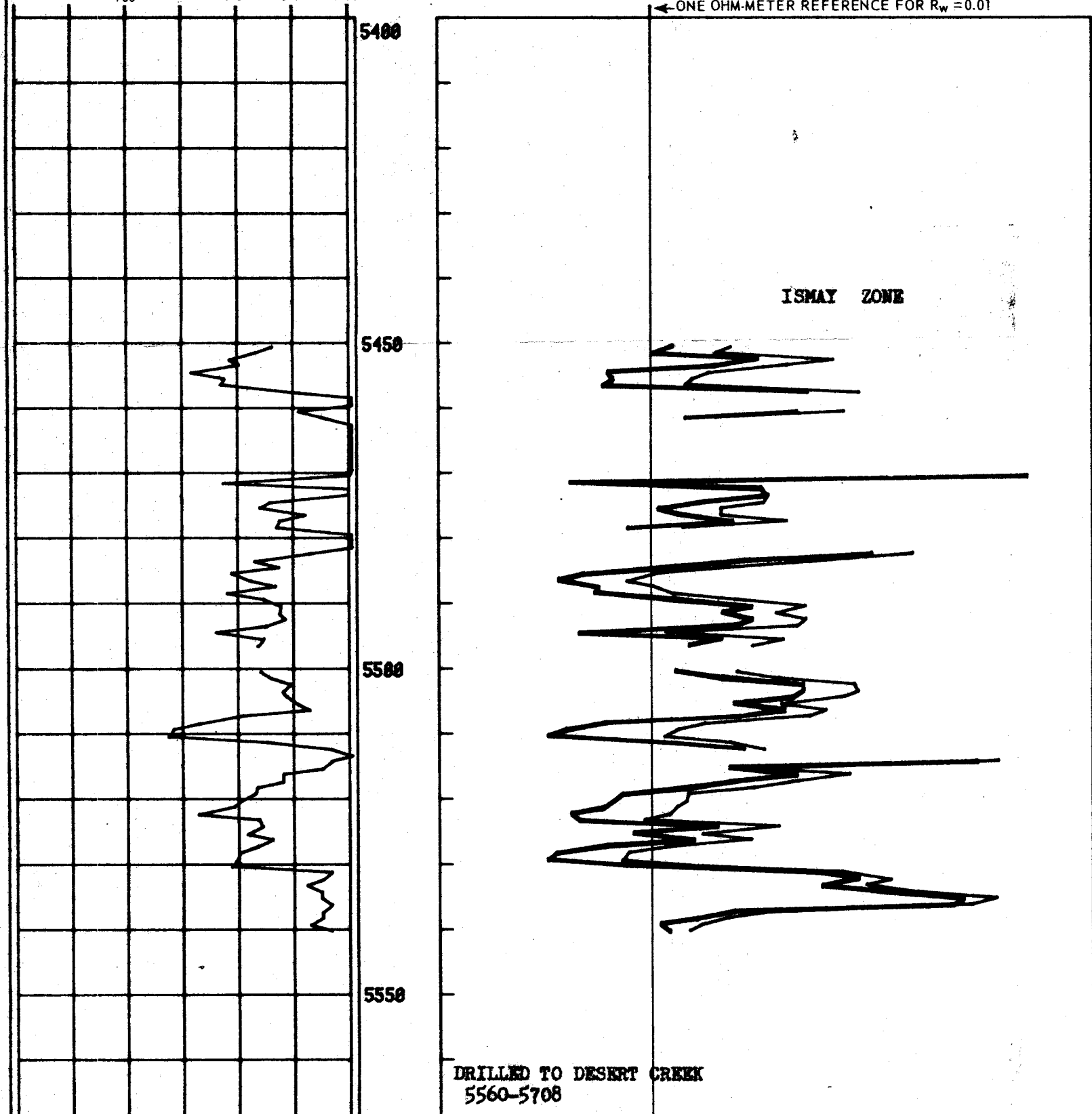
PERMEABILITY
MILLIDARCIES

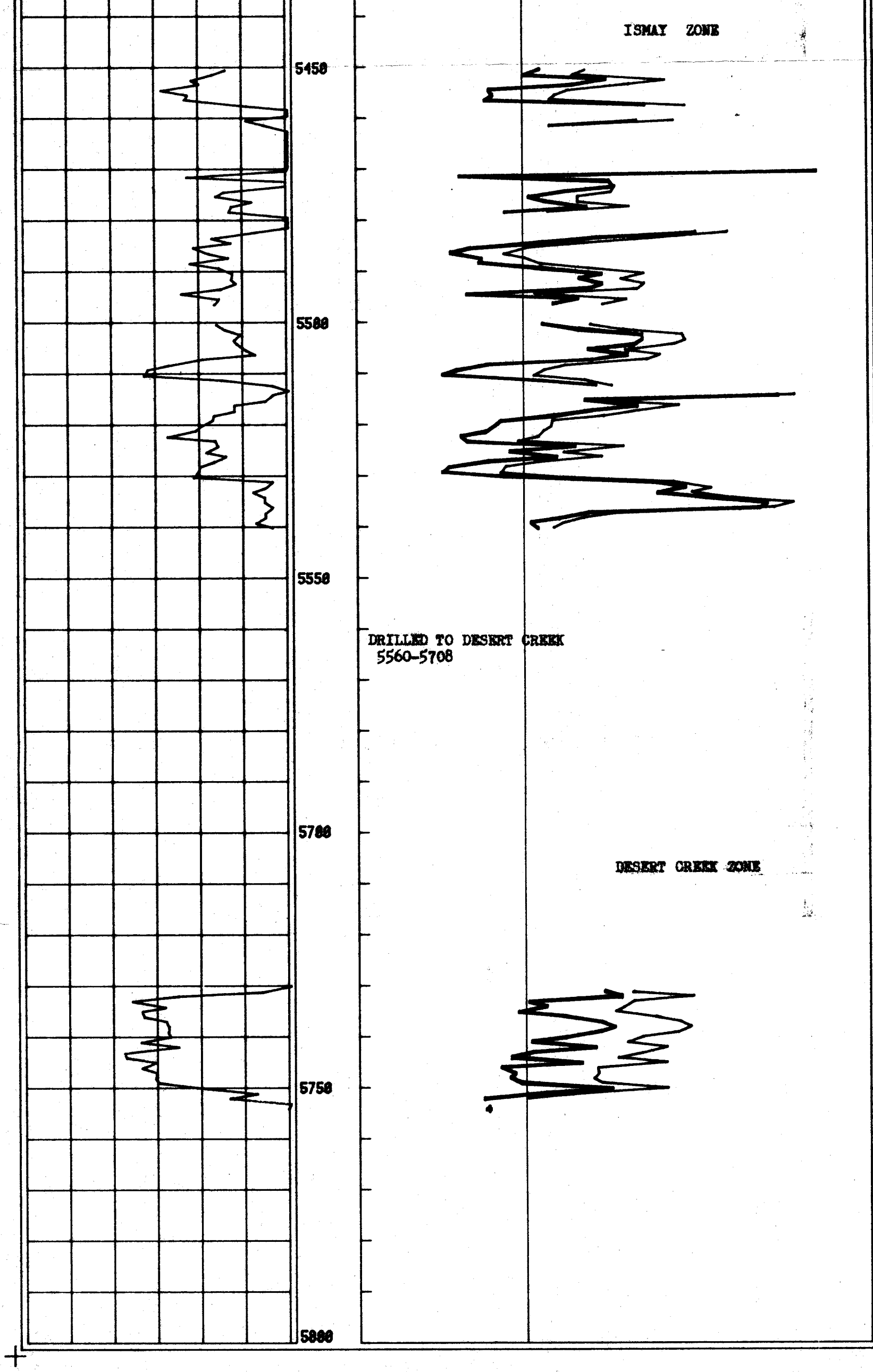
CORE ANALYSIS CALCULATED RESISTIVITY
R_o = OHM-METERS AT 100% S_w ———
R_{mp} = OHM-METERS AT CRITICAL S_w ———

DEPTH FEET

1000 100 10 1.0 0.1 0.01

← ONE OHM-METER REFERENCE FOR R_w = 0.01




ISMAY ZONE
5450
5500
5550
DRILLED TO DESERT CREEK
5560-5708
5700
DESERT CREEK ZONE
5750
5800

CORE LABORATORIES, INC. *Petroleum Reservoir Engineering*

COMPANY CELSIUS ENERGY COMPANY — FILE NO. 3883-883338
WELL PATTERSON UNIT # 8 — DATE 28-AUG-1984
FIELD WILDCAT — FORMATION ISMAY & DESERT CREEK — ELEV. 5341 G.L.
COUNTY SAN JUAN — STATE UTAH — DRLG. FLD. WBM — CORES
LOCATION SE, SE SEC. 33-T37S-R25E

CORRELATION COREGRAPH

VERTICAL SCALE: 5" = 100'

Gamma Ray
RADIATION INCREASE →
PARADOX FORMATION

Permeability
MILLIDARCIES
100 10 1.0 .1

Depth Feet

Porosity
PERCENT
30 20 10 0

Total Water
PERCENT PORE SPACE
100 80 60 40 20 0

Oil Saturation
PERCENT PORE SPACE
0 20 40 60 80 100

ISMAY ZONE
ϕ-1 5440-5500
ϕ-2 5500-5560

5400
5450
5500
5550

DRILLED

DESERT CREEK ZONE
ϕ-D 5708-5768

5700

Gamma Ray
RADIATION INCREASE

Permeability
MILLIDARCIES

Porosity
PERCENT

Oil Saturation
PERCENT PORE SPACE

PARADOX FORMATION

100 10 1.0 .1

Depth Feet

30 20 10 0

0 20 40 60 80 100

ISMAY ZONE
ϕ-1 5440-5500
ϕ-2 5500-5560

DESERT CREEK ZONE
ϕ-3 5708-5768

5400
5450
5500
5550
DRILLED
5700
5750
5800

*** FINAL REPORT ***

CORE ANALYSIS REPORT

FOR

CELSIUS ENERGY COMPANY

PATTERSON UNIT # 9
WILDCAT
SAN JUAN, UTAH

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

CELSIUS ENERGY COMPANY
PATTERSON UNIT # 9
WILDCAT
SAN JUAN,UTAH

DATE : 28-AUG-1984
FORMATION : ISMAY & DESERT CREEK
DRLG. FLUID: WBM
LOCATION : SE,SE SEC. 33-T37S-R25E

FILE NO : 3803-003338
ANALYSTS : DS;EV
ELEVATION: 5341 G.L.

FULL DIAMETER ANALYSIS-B.L. POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
	5440.0-43.0							LM SL/SHY -- NO ANALYSIS
	5443.0-45.0							ANHYDRITE -- NO ANALYSIS
	5445.0-50.0							LM SL/SHY -- NO ANALYSIS
1	5450.0-51.0	0.24	0.19	8.6	3.3	32.9	2.73	LM GRY FNXLN P-P
2	5451.0-52.0	0.47	0.25	10.0	1.5	23.4	2.73	LM GRY FNXLN P-P
3	5452.0-53.0	1.41	0.86	4.7	1.9	26.0	2.72	LM GRY FNXLN P-P
4	5453.0-54.0	0.96	*	6.4	1.0	10.4	2.71	LM GRY FNXLN P-P
5	5454.0-55.0	7.44	3.17	13.7	0.8	18.8	2.74	LM GRY FNXLN P-P
6	5455.0-56.0	1.70	1.56	13.1	0.0	21.4	2.78	LM GRY FNXLN SL/DOL P-P
7	5456.0-57.0	2.15	1.44	14.1	0.0	25.1	2.76	LM GRY FNXLN P-P
8	5457.0-58.0	0.10	*	3.3	1.0	24.3	2.71	LM GRY VFXLN
9	5458.0-59.0	<0.01	*	2.1	0.0	56.3	2.75	LM GRY VFXLN SL/DOL
10	5459.0-60.0	<0.01	*	1.8	0.0	46.2	2.75	LM GRY VFXLN SL/DOL
11	5460.0-61.0	0.08	*	3.6	0.0	37.7	2.80	LM GRY VFXLN SL/DOL
12	5461.0-62.0	0.03	*	7.9	8.1	28.3	2.79	LM GRY VFXLN SL/DOL
13	5462.0-63.0	<0.01	*	2.0	0.0	55.7	2.76	LM GRY VFXLN SL/DOL
14	5463.0-64.0	<0.01	*	2.5	0.0	61.8	2.77	LM GRY VFXLN SL/DOL
15	5464.0-65.0	<0.01	*	1.1	0.0	69.6	2.78	LM GRY VFXLN SL/DOL
16	5465.0-66.0	<0.01	*	1.0	0.0	50.4	2.75	LM GRY VFXLN SL/DOL
17	5466.0-67.0	<0.01	*	0.8	0.0	36.9	2.73	LM GRY VFXLN
18	5467.0-68.0	<0.01	*	1.4	0.0	55.5	2.72	LM GRY VFXLN
19	5468.0-69.0	<0.01	*	1.1	0.0	39.7	2.76	LM GRY VFXLN STYL
20	5469.0-70.0	<0.01	*	0.8	0.0	45.2	2.73	LM GRY VFXLN STYL
21	5470.0-71.0	0.01	*	0.7	0.0	14.8	2.76	LM GRY VFXLN
22	5471.0-72.0	1.91	*	17.8	0.5	48.4	2.82	DOL LTBRN FNXLN
23	5472.0-73.0	0.01	*	4.6	6.1	34.3	2.82	DOL LTBRN VFXLN
24	5473.0-74.0	0.01	*	4.4	7.1	35.4	2.78	LM LTBRN VFXLN SL/DOL
25	5474.0-75.0	0.28	*	6.9	0.0	39.8	2.81	LM LTBRN VFXLN SL/DOL

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

CELSIUS ENERGY COMPANY
PATTERSON UNIT # 9

DATE : 28-AUG-1984
FORMATION : ISMAY & DESERT CREEK

FILE NO : 3803-003338
ANALYSTS : DS;EV

FULL DIAMETER ANALYSIS-B.L. POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
26	5475.0-76.0	0.40	*	9.6	0.0	30.4	2.80	LM LTBRN VFXLN SL/DOL
27	5476.0-77.0	0.06	*	8.3	0.8	24.6	2.77	LM LTBRN VFXLN SL/DOL
28	5477.0-78.0	0.18	*	5.6	7.7	21.8	2.81	DOL BRN VFXLN SL/CALC
29	5478.0-79.0	0.20	*	11.8	3.8	19.8	2.79	DOL BRN VFXLN SL/CALC
30	5479.0-80.0	<0.01	*	3.5	0.0	60.5	2.75	LM GRY VFXLN STYL
31	5480.0-81.0	<0.01	*	2.7	0.0	55.1	2.74	LM GRY VFXLN STYL
32	5481.0-82.0	<0.01	*	2.1	0.0	43.8	2.72	LM GRY VFXLN
33	5482.0-83.0	0.05	0.02	2.1	6.9	31.6	2.71	LM GRY VFXLN STYL
34	5483.0-84.0	0.51	0.03	5.2	22.3	58.7	2.79	LM GRY FNXLN SL/DOL SL/ANHY
35	5484.0-85.0	0.18	0.13	8.5	0.0	59.3	2.81	LM GRY FNXLN SL/DOL SL/ANHY
36	5485.0-86.0	1.30	1.16	16.3	0.0	54.8	2.81	LM GRY FNXLN SL/DOL SL/ANHY
37	5486.0-87.0	0.56	*	19.2	9.7	47.0	2.77	LM GRY FNXLN SL/DOL SL/ANHY
38	5487.0-88.0	0.20	*	14.5	3.0	58.1	2.81	LM GRY FNXLN SL/DOL SL/ANHY
39	5488.0-89.0	1.58	1.42	14.9	15.5	37.3	2.84	LM GRY FNXLN SL/DOL SL/ANHY
40	5489.0-90.0	0.33	0.29	8.5	7.0	28.9	2.81	LM GRY FNXLN SL/DOL SL/ANHY
41	5490.0-91.0	0.17	0.14	4.9	2.4	29.0	2.77	LM GRY FNXLN SL/DOL SL/ANHY
42	5491.0-92.0	0.18	0.14	6.1	3.0	41.4	2.78	LM GRY FNXLN SL/DOL SL/ANHY
43	5492.0-93.0	0.14	0.14	4.9	5.8	16.3	2.80	LM GRY FNXLN SL/DOL SL/ANHY
44	5493.0-94.0	0.31	0.28	5.5	14.4	40.3	2.79	LM GRY FNXLN SL/DOL SL/ANHY
45	5494.0-95.0	2.60	*	16.7	6.6	47.0	2.82	LM GRY FNXLN SL/DOL SL/ANHY
46	5495.0-96.0	0.35	0.30	6.1	3.4	39.5	2.78	LM GRY FNXLN SL/DOL SL/ANHY
47	5496.0-97.0	0.45	*	7.7	5.8	32.7	2.78	LM GRY FNXLN SL/DOL SL/ANHY
	5497.0-00.0							CORE LOSS
48	5500.0-01.0	0.38	0.32	8.5	7.3	38.1	2.80	LM GRY-BRN VFXLN SL/DOL SL/ANHY
49	5501.0-02.0	0.25	0.19	6.1	6.6	32.8	2.79	LM GRY-BRN VFXLN SL/DOL SL/ANHY
50	5502.0-03.0	0.11	0.07	3.4	2.8	28.1	2.80	LM GRY-BRN VFXLN SL/DOL SL/ANHY
51	5503.0-04.0	0.16	0.13	3.4	10.3	20.5	2.77	LM GRY VFXLN SL/DOL SL/ANHY
52	5504.0-05.0	0.13	0.08	3.7	0.0	28.7	2.76	LM GRY VFXLN SL/DOL SL/ANHY
53	5505.0-06.0	0.08	*	5.6	0.0	27.5	2.76	LM GRY VFXLN SL/DOL SL/ANHY
54	5506.0-07.0	0.05	0.05	3.9	1.6	25.9	2.77	LM GRY VFXLN SL/DOL SL/ANHY

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

CELSIUS ENERGY COMPANY
PATTERSON UNIT # 9

DATE : 28-AUG-1984
FORMATION : ISMAY & DESERT CREEK

FILE NO : 3803-003338
ANALYSTS : DS;EV

FULL DIAMETER ANALYSIS-B.L. POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
55	5507.0-08.0	0.84	0.27	5.4	0.0	28.6	2.79	LM GRY VFXLN SL/DOL SL/ANHY
56	5508.0-09.0	5.12	4.81	13.9	6.8	17.5	2.78	DOL LTBRN FNXLN SL/CALC SL/ANHY
57	5509.0-10.0	15.	15.	18.5	14.0	16.8	2.80	DOL BRN FNXLN SL/ANHY SL/CALC
58	5510.0-11.0	18.	12.	20.8	15.3	20.4	2.85	DOL BRN FNXLN SL/ANHY
59	5511.0-12.0	0.29	0.29	8.7	7.4	44.1	2.79	DOL BRN FNXLN SL/CALC
60	5512.0-13.0	0.02	<0.01	5.2	1.6	35.2	2.74	LM GRY VFXLN SL/DOL
61	5513.0-14.0	<0.01	*	0.8	11.4	56.9	2.72	LM DKGRY VFXLN SL/SHY
62	5514.0-15.0	0.02	<0.01	1.0	0.0	61.6	2.70	LM GRY VFXLN SL/SHY SL/FOSS
63	5515.0-16.0	0.03	<0.01	5.8	26.9	43.0	2.76	LM DKGRY VFXLN SL/SHY SL/FOSS
64	5516.0-17.0	0.16	0.05	3.6	0.0	50.7	2.76	LM GRY VFXLN SL/DOL
65	5517.0-18.0	0.15	0.14	5.4	0.0	64.2	2.74	LM GRY VFXLN SL/DOL
66	5518.0-19.0	0.46	0.42	7.7	3.9	34.5	2.76	LM GRY VFXLN SL/DOL
67	5519.0-20.0	0.50	0.42	12.3	0.0	37.8	2.75	LM GRY FNXLN SL/DOL
68	5520.0-21.0	0.96	0.94	13.1	0.0	52.2	2.75	LM GRY-BRN FNXLN SL/DOL
69	5521.0-22.0	1.23	1.23	14.2	0.0	52.1	2.77	DOL BRN FNXLN SL/CALC
70	5522.0-23.0	5.23	2.18	17.7	3.8	36.5	2.82	DOL BRN FNXLN SL/CALC
71	5523.0-24.0	0.41	0.30	16.5	3.7	17.0	2.79	DOL BRN FNXLN SL/CALC
72	5524.0-25.0	0.36	0.22	6.3	0.0	35.2	2.77	DOL LTBRN VFXLN SL/CALC
73	5525.0-26.0	0.69	0.62	11.4	3.5	38.8	2.78	DOL LTBRN FNXLN SL/CALC
74	5526.0-27.0	0.24	0.20	7.4	1.3	40.1	2.79	DOL LTBRN FNXLN SL/CALC
75	5527.0-28.0	0.46	0.44	13.9	0.0	43.3	2.83	DOL LTBRN-GRY FNXLN
76	5528.0-29.0	0.98	0.96	19.8	0.5	70.9	2.83	DOL LTBRN FNXLN
77	5529.0-30.0	1.13	1.06	20.9	0.0	58.5	2.84	DOL BRN FNXLN
78	5530.0-31.0	1.36	*	12.0	0.0	65.4	2.82	DOL BRN FNXLN SL/CALC
79	5531.0-32.0	0.02	*	3.0	0.0	57.0	2.75	LM GRY VFXLN SL/DOL SL/ANHY
80	5532.0-33.0	0.03	*	2.3	0.0	59.3	2.74	LM GRY VFXLN SL/DOL SL/ANHY
81	5533.0-34.0	0.06	*	3.0	0.0	27.0	2.77	LM GRY VFXLN SL/DOL SL/ANHY
82	5534.0-35.0	0.03	*	1.9	0.0	47.9	2.71	LM GRY VFXLN
83	5535.0-36.0	0.03	*	1.1	0.0	63.6	2.73	LM GRY VFXLN
84	5536.0-37.0	0.02	*	1.2	0.0	63.8	2.76	LM GRY VFXLN SL/DOL SL/ANHY

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

CELSIUS ENERGY COMPANY
PATTERSON UNIT # 9

DATE : 28-AUG-1984
FORMATION : ISMAY & DESERT CREEK

FILE NO : 3803-003338
ANALYSTS : DS;EV

FULL DIAMETER ANALYSIS-B.L. POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN.	DESCRIPTION
85	5537.0-38.0	0.03	*	5.6	0.0	44.1	2.84	DOL LTBRN FNXLN SL/CALC
86	5538.0-39.0	0.03	*	7.3	0.0	51.4	2.81	DOL LTBRN FNXLN SL/CALC SL/SHY
87	5539.0-40.0	0.05	*	9.5	0.0	56.5	2.80	DOL LTBRN FNXLN SL/CALC SL/SHY
88	5540.0-41.0	0.02	*	8.8	9.6	77.2	2.79	DOL DKGRY FNXLN SL/CALC SL/SHY
	5541.0-60.0							SHALE -- NO ANALYSIS
	5560.0-08.0							DRILLED TO DESERT CREEK
								DESERT CREEK CORE # 3 5708-5768
	5708.0-26.0							LM SL/SHY SL/ANHY -- NO ANALYSIS
	5726.0-30.0							ANHYDRITE -- NO ANALYSIS
89	5730.0-31.0	<0.01	*	2.0	1.1	61.3	2.88	DOL BRN VFXLN SL/ANHY
90	5731.0-32.0	0.04	*	4.9	0.0	74.1	2.77	DOL BRN VFXLN SL/SHY
91	5732.0-33.0	3.41	1.38	4.2	3.5	38.4	2.82	DOL BRN VFXLN SL/CALC
92	5733.0-34.0	38.	26.	9.8	10.4	26.7	2.85	DOL BRN FNXLN SL/ANHY
93	5734.0-35.0	6.26	4.49	8.3	11.1	19.7	2.84	DOL BRN FNXLN SL/ANHY
94	5735.0-36.0	23.	15.	10.7	12.5	25.0	2.77	DOL BRN FNXLN SL/ANHY
95	5736.0-37.0	20.	10.	7.2	9.2	18.4	2.79	DOL BRN FNXLN SL/CALC SL/ANHY
96	5737.0-38.0	6.21	2.74	5.0	0.0	38.6	2.79	DOL BRN FNXLN SL/CALC SL/ANHY
97	5738.0-39.0	5.40	4.80	4.5	7.7	12.4	2.80	DOL BRN FNXLN SL/CALC SL/ANHY
98	5739.0-40.0	5.62	4.77	5.1	3.8	30.0	2.79	DOL BRN FNXLN SL/CALC SL/ANHY
99	5740.0-41.0	4.81	4.57	7.0	1.7	13.8	2.77	DOL BRN FNXLN SL/CALC SL/ANHY
100	5741.0-42.0	24.	16.	9.6	11.2	12.8	2.76	DOL BRN FNXLN SL/CALC SL/ANHY
101	5742.0-43.0	3.10	3.10	5.3	0.0	36.3	2.83	DOL BRN FNXLN SL/CALC SL/ANHY
102	5743.0-44.0	57.	32.	9.5	6.3	18.1	2.79	DOL BRN FNXLN SL/CALC SL/ANHY
103	5744.0-45.0	50.	38.	11.5	13.0	19.5	2.77	DOL BRN FNXLN SL/CALC SL/ANHY
104	5745.0-46.0	11.	7.33	6.0	7.1	20.2	2.76	LM GRY-BRN FNXLN SL/DOL SL/ANHY
105	5746.0-47.0	22.	*	12.5	6.7	13.4	2.73	LM GRY-BRN FNXLN SL/DOL SL/ANHY
106	5747.0-48.0	10.	9.81	11.0	0.8	12.2	2.74	LM GRY-BRN FNXLN SL/DOL SL/ANHY
107	5748.0-49.0	11.	10.	11.6	7.4	14.8	2.73	LM GRY-BRN FNXLN SL/DOL SL/ANHY
108	5749.0-50.0	8.76	7.81	10.3	1.4	16.7	2.73	LM GRY-BRN FNXLN SL/DOL SL/ANHY
109	5750.0-51.0	0.93	0.41	4.6	0.0	44.6	2.81	DOL BRN VFXLN SL/CALC

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

CELSIUS ENERGY COMPANY
PATTERSON UNIT # 9

DATE : 28-AUG-1984
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FILE NO : 3803-003338
ANALYSTS : DS&EV

FULL DIAMETER ANALYSIS-B.L. POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
110	5751.0-52.0	0.05	0.03	8.3	0.0	79.5	2.80	DOL BRN FNXLN SL/CALC
111	5752.0-53.0	0.22	0.14	14.6	0.0	62.6	2.82	DOL BRN VFXLN SL/CALC
112	5753.0-54.0	<0.01	<0.01	13.1	0.0	77.1	2.80	DOL BRN VFXLN SL/SHY
113	5754.0-55.0	0.01	<0.01	14.0	0.0	77.9	2.78	DOL BRN VFXLN SL/SHY
	5755.0-66.0							SHALE -- NO ANALYSIS
	5766.0-68.0							CORE LOSS

* SAMPLE NOT SUITABLE FOR FULL DIAMETER ANALYSIS

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

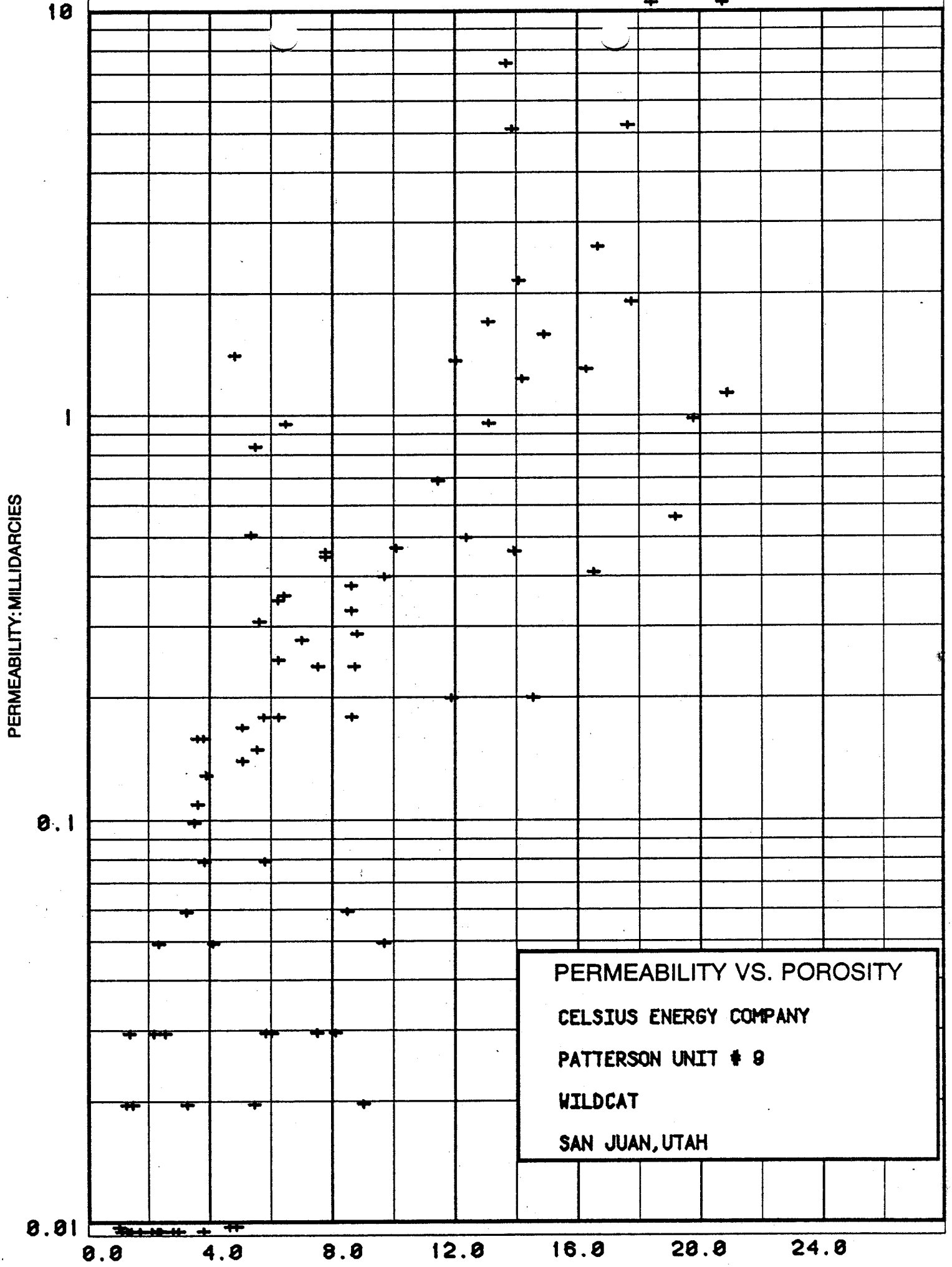
DALLAS, TEXAS

PERMEABILITY VS POROSITY

COMPANY: CELSIUS ENERGY COMPANY
FIELD : WILDCAT
WELL : PATTERSON UNIT # 9
COUNTY, STATE: SAN JUAN,UTAH

AIR PERMEABILITY : MD - HORIZONTAL (UNCORRECTED FOR SLIPPAGE)
POROSITY : PERCENT (HELIUM)

DEPTH INTERVAL	RANGE & SYMBOL	PERMEABILITY MINIMUM	PERMEABILITY MAXIMUM	POROSITY MIN.	POROSITY MAX.	POROSITY AVERAGE	PERMEABILITY AVERAGES ARITHMETIC	HARMONIC	GEOMETRIC
5450.0 - 5541.0	1 (+)	0.001	20.0	0.0	22.0	7.5	0.93	0.01	0.10



CL-1130 (7520-456)

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

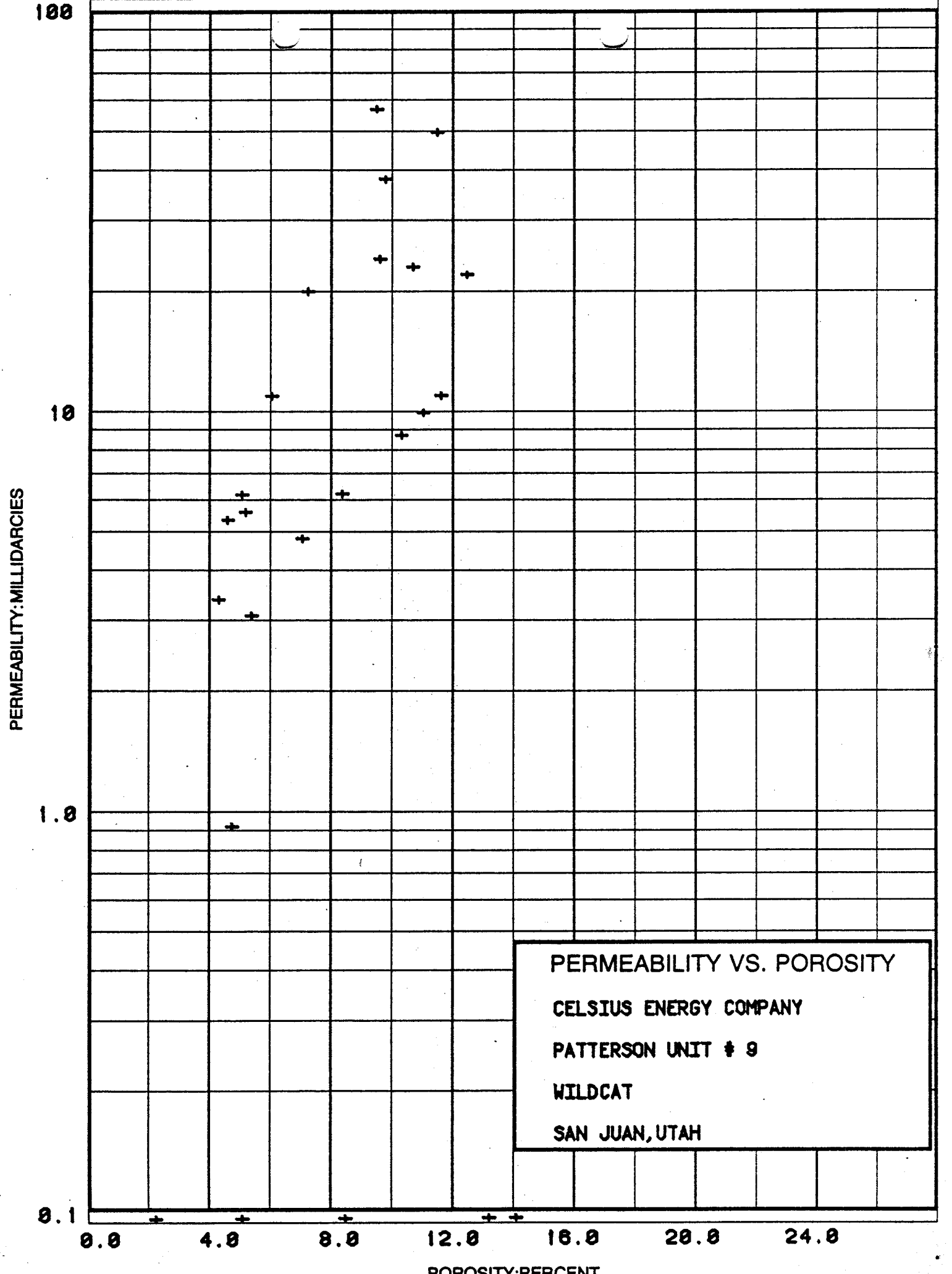
DALLAS, TEXAS

PERMEABILITY VS POROSITY

COMPANY: CELSIUS ENERGY COMPANY WELL : PATTERSON UNIT # 9
FIELD : WILDCAT COUNTY, STATE: SAN JUAN,UTAH

AIR PERMEABILITY : MD - HORIZONTAL (UNCORRECTED FOR SLIPPAGE)
POROSITY : PERCENT (HELIUM)

DEPTH INTERVAL	RANGE & SYMBOL	PERMEABILITY MINIMUM	PERMEABILITY MAXIMUM	POROSITY MIN.	POROSITY MAX.	POROSITY AVERAGE	PERMEABILITY AVERAGES ARITHMETIC	HARMONIC	GEOMETRIC
5730.0 - 5755.0	1 (+)	0.001	60.0	0.0	15.0	8.4	12.	0.01	2.1



CL-1130 (7520-456)

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: CELSIUS ENERGY COMPANY
FIELD : WILDCAT

WELL : PATTERSON UNIT # 9
COUNTY, STATE: SAN JUAN,UTAH

AIR PERMEABILITY : MD. (HORIZONTAL) RANGE USED 0.000 TO 100.
POROSITY : PERCENT (HELIUM) RANGE USED 0.0 TO 46.0

(PERMEABILITY UNCORRECTED FOR SLIPPAGE)

DEPTH LIMITS : 5450.0 - 5541.0 INTERVAL LENGTH : 91.0
FEET ANALYZED IN ZONE : 88.0. LITHOLOGY EXCLUDED : NONE

DATA SUMMARY

POROSITY AVERAGE	PERMEABILITY AVERAGES ARITHMETIC	HARMONIC	GEOMETRIC
7.5	0.93	0.01	0.10

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: CELSIUS ENERGY COMPANY
FIELD : WILDCAT
WELL : PATTERSON UNIT # 9
COUNTY, STATE: SAN JUAN,UTAH

GROUPING BY POROSITY RANGES

POROSITY RANGE	FEET IN RANGE	AVERAGE POROSITY	AVERAGE PERM. (GEOM.)	AVERAGE PERM. (ARITH)	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
0.0 - 2.0	13.0	1.1	0.008	0.011	14.8	14.8
2.0 - 4.0	17.0	3.0	0.028	0.058	19.3	34.1
4.0 - 6.0	14.0	5.2	0.104	0.278	15.9	50.0
6.0 - 8.0	11.0	6.9	0.223	0.326	12.5	62.5
8.0 - 10.0	9.0	8.8	0.150	0.217	10.2	72.7
10.0 - 12.0	3.0	11.1	0.402	0.453	3.4	76.1
12.0 - 14.0	7.0	13.1	1.5	2.5	8.0	84.1
14.0 - 16.0	4.0	14.4	0.956	1.3	4.5	88.6
16.0 - 18.0	5.0	17.0	1.7	2.3	5.7	94.3
18.0 - 20.0	3.0	19.2	2.0	5.5	3.4	97.7
20.0 - 22.0	2.0	20.9	4.5	9.6	2.3	100.0

TOTAL NUMBER OF FEET = 88.0

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: CELSIUS ENERGY COMPANY
FIELD : WILDCAT
WELL : PATTERSON UNIT # 9
COUNTY, STATE: SAN JUAN,UTAH

GROUPING BY PERMEABILITY RANGES

PERMEABILITY RANGE	FEET IN RANGE	AVERAGE PERM. (GEOM.)	AVERAGE PERM. (ARITH)	AVERAGE POROSITY	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
0.005 - 0.010	14.0	0.005	0.005	1.7	15.9	15.9
0.010 - 0.020	3.0	0.010	0.010	3.2	3.4	19.3
0.020 - 0.039	12.0	0.025	0.026	4.3	13.6	33.0
0.039 - 0.078	5.0	0.054	0.054	5.4	5.7	38.6
0.078 - 0.156	7.0	0.110	0.113	4.3	8.0	46.6
0.156 - 0.312	14.0	0.212	0.217	7.3	15.9	62.5
0.312 - 0.625	13.0	0.429	0.434	10.1	14.8	77.3
0.625 - 1.250	7.0	0.956	0.970	13.0	8.0	85.2
1.250 - 2.500	7.0	1.6	1.6	13.3	8.0	93.2
2.500 - 5.000	1.0	2.6	2.6	16.7	1.1	94.3
5.- 10.	3.0	5.8	5.9	15.1	3.4	97.7
10.- 20.	2.0	16.	17.	19.6	2.3	100.0

TOTAL NUMBER OF FEET = 88.0

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: CELSIUS ENERGY COMPANY
FIELD : WILDCAT

WELL : PATTERSON UNIT # 9
COUNTY, STATE: SAN JUAN,UTAH

POROSITY-FEET OF STORAGE CAPACITY LOST FOR SELECTED POROSITY CUT OFF

POROSITY CUT OFF	FEET LOST	CAPACITY LOST (%)	FEET REMAINING	CAPACITY REMAINING (%)	ARITH MEAN	MEDIAN
0.0	0.0	0.0	88.0	100.0	7.5	6.0
2.0	13.0	2.2	75.0	97.8	8.6	7.2
4.0	30.0	9.8	58.0	90.2	10.3	8.9
6.0	44.0	20.9	44.0	79.1	11.9	11.3
8.0	55.0	32.4	33.0	67.6	13.5	13.3
10.0	64.0	44.4	24.0	55.6	15.3	15.0
12.0	67.0	49.4	21.0	50.6	15.9	15.7
14.0	74.0	63.3	14.0	36.7	17.3	17.2
16.0	78.0	72.1	10.0	27.9	18.4	18.0
18.0	83.0	85.0	5.0	15.0	19.8	
20.0	86.0	93.7	2.0	6.3	20.9	
22.0	88.0	100.0	0.0	0.0		

TOTAL STORAGE CAPACITY IN POROSITY-FEET = 659.7

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

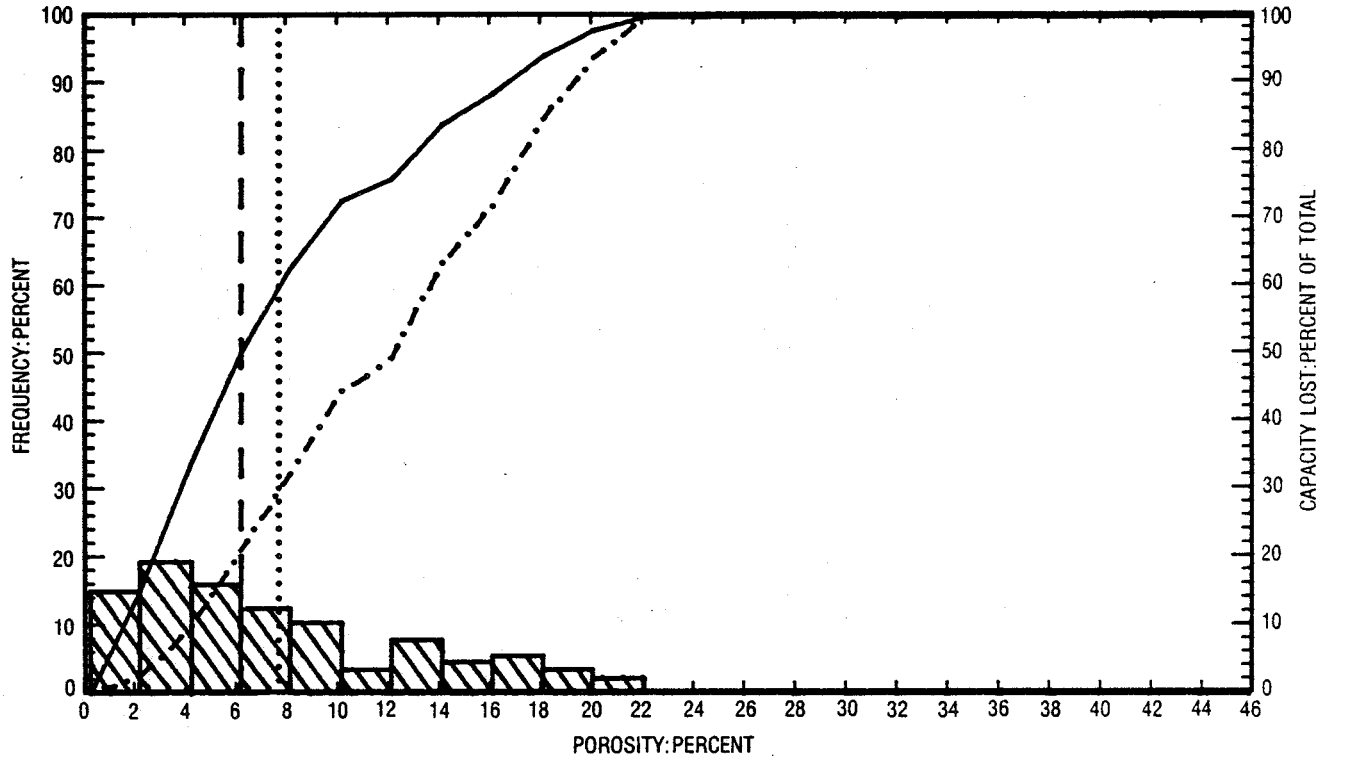
STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

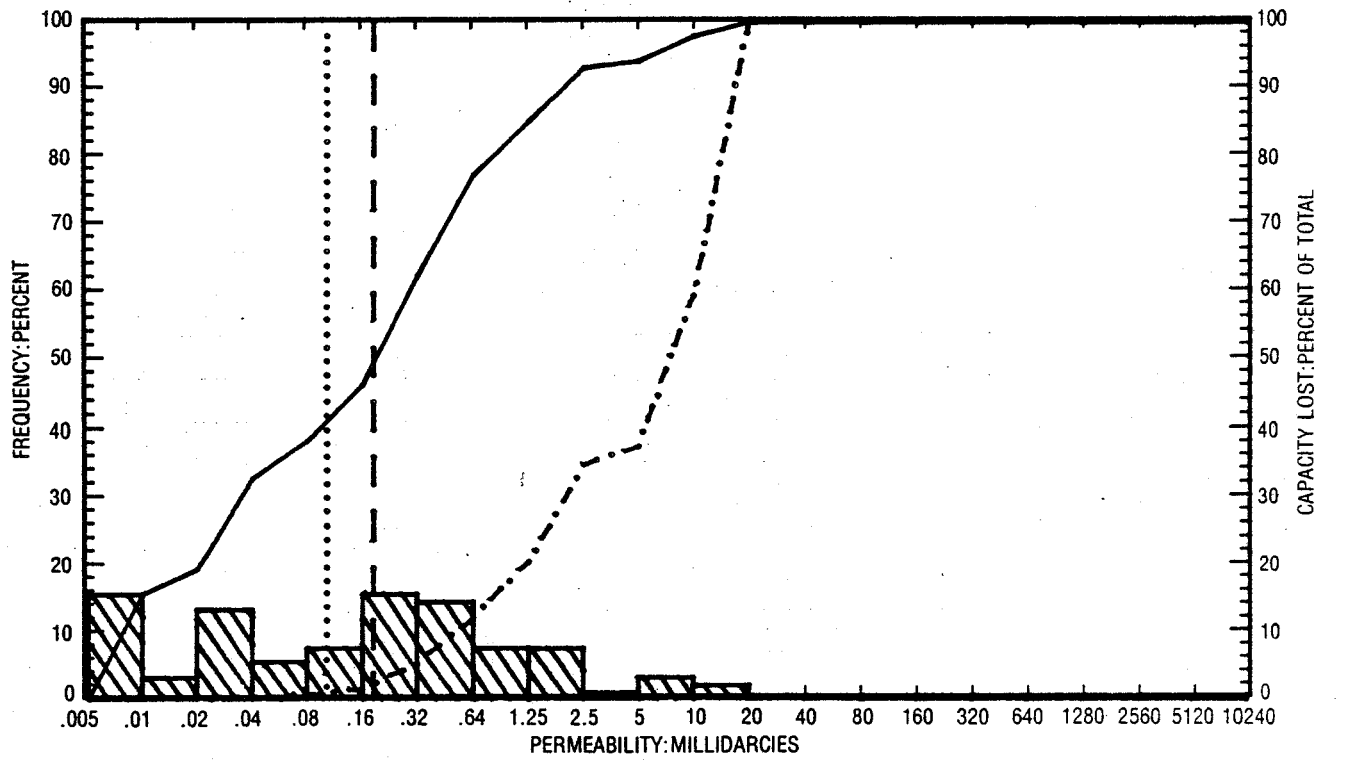
COMPANY: CELSIUS ENERGY COMPANY
FIELD : WILDCAT
WELL : PATTERSON UNIT # 9
COUNTY, STATE: SAN JUAN,UTAH

MILLIDARCY-FEET OF FLOW CAPACITY LOST FOR SELECTED PERMEABILITY CUT OFF

PERMEABILITY CUT OFF	FEET LOST	CAPACITY LOST (%)	FEET REMAINING	CAPACITY REMAINING (%)	GEOM MEAN	MEDIAN
0.005	0.0	0.0	88.0	100.0	0.10	0.18
0.010	14.0	0.1	74.0	99.9	0.24	0.26
0.020	17.0	0.1	71.0	99.9	0.27	0.28
0.039	29.0	0.5	59.0	99.5	0.44	0.38
0.078	34.0	0.8	54.0	99.2	0.54	0.43
0.156	41.0	1.8	47.0	98.2	0.68	0.52
0.312	55.0	5.5	33.0	94.5	1.12	0.88
0.625	68.0	12.4	20.0	87.6	2.10	1.68
1.250	75.0	20.7	13.0	79.3	3.21	
2.500	82.0	34.7	6.0	65.3	7.20	7.94
5.	83.0	37.9	5.0	62.1	8.83	
10.	86.0	59.7	2.0	40.3	16.43	
20.	88.0	100.0	0.0	0.0		

TOTAL FLOW CAPACITY IN MILLIDARCY-FEET(ARITHMETIC) = 81.68





PERMEABILITY AND POROSITY HISTOGRAMS

CELSIUS ENERGY COMPANY
PATTERSON UNIT # 9
WILDCAT
SAN JUAN, UTAH

LEGEND

- ARITHMETIC MEAN POROSITY
- GEOMETRIC MEAN PERMEABILITY
- MEDIAN VALUE
- CUMULATIVE FREQUENCY
- CUMULATIVE CAPACITY LOST

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: CELSIUS ENERGY COMPANY — WELL : PATTERSON UNIT # 9
FIELD : WILDCAT — COUNTY, STATE: SAN JUAN,UTAH

AIR PERMEABILITY : MD. (HORIZONTAL) RANGE USED 0.000 TO 100.
POROSITY : PERCENT (HELIUM) RANGE USED 0.0 TO 46.0

(PERMEABILITY UNCORRECTED FOR SLIPPAGE)

DEPTH LIMITS : 5730.0 - 5755.0 INTERVAL LENGTH : 25.0
FEET ANALYZED IN ZONE : 25.0 LITHOLOGY EXCLUDED : NONE

DATA SUMMARY

POROSITY AVERAGE	PERMEABILITY AVERAGES ARITHMETIC	HARMONIC	GEOMETRIC
8.4	12.	0.01	2.1

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: CELSIUS ENERGY COMPANY — WELL : PATTERSON UNIT # 9
FIELD : WILDCAT — COUNTY, STATE: SAN JUAN, UTAH

GROUPING BY POROSITY RANGES

POROSITY RANGE	FEET IN RANGE	AVERAGE POROSITY	AVERAGE PERM. (GEOM.)	AVERAGE PERM. (ARITH)	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
2.0 - 4.0	1.0	2.0	0.005	0.005	4.0	4.0
4.0 - 6.0	7.0	4.8	1.8	3.5	28.0	32.0
6.0 - 8.0	3.0	6.7	10.	12.	12.0	44.0
8.0 - 10.0	5.0	9.1	7.0	25.	20.0	64.0
10.0 - 12.0	5.0	11.0	16.	21.	20.0	84.0
12.0 - 14.0	2.0	12.8	0.328	11.	8.0	92.0
14.0 - 16.0	2.0	14.3	0.047	0.115	8.0	100.0

TOTAL NUMBER OF FEET = 25.0

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: CELSIUS ENERGY COMPANY
FIELD : WILDCAT
WELL : PATTERSON UNIT # 9
COUNTY, STATE: SAN JUAN, UTAH

GROUPING BY PERMEABILITY RANGES

PERMEABILITY RANGE	FEET IN RANGE	AVERAGE PERM. (GEOM.)	AVERAGE PERM. (ARITH)	AVERAGE POROSITY	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
0.005 - 0.010	2.0	0.005	0.005	7.5	8.0	8.0
0.010 - 0.020	1.0	0.010	0.010	14.0	4.0	12.0
0.039 - 0.078	2.0	0.045	0.045	6.6	8.0	20.0
0.156 - 0.312	1.0	0.220	0.220	14.6	4.0	24.0
0.625 - 1.250	1.0	0.930	0.930	4.6	4.0	28.0
2.500 - 5.000	3.0	3.7	3.8	5.5	12.0	40.0
5. - 10.	5.0	6.4	6.4	6.6	20.0	60.0
10. - 20.	3.0	11.	11.	9.5	12.0	72.0
20. - 40.	5.0	25.	25.	10.0	20.0	92.0
40. - 80.	2.0	53.	54.	10.5	8.0	100.0

TOTAL NUMBER OF FEET = 25.0

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: CELSIUS ENERGY COMPANY
FIELD : WILDCAT
WELL : PATTERSON UNIT # 9
COUNTY, STATE: SAN JUAN,UTAH

POROSITY-FEET OF STORAGE CAPACITY LOST FOR SELECTED POROSITY CUT OFF

POROSITY CUT OFF	FEET LOST	CAPACITY LOST (%)	FEET REMAINING	CAPACITY REMAINING (%)	ARITH MEAN	MEDIAN
0.0	0.0	0.0	25.0	100.0	8.4	8.6
2.0	0.0	0.0	25.0	100.0	8.4	8.6
4.0	1.0	0.9	24.0	99.1	8.7	8.8
6.0	8.0	16.9	17.0	83.1	10.3	10.2
8.0	11.0	26.5	14.0	73.5	11.1	10.8
10.0	16.0	48.1	9.0	51.9	12.1	
12.0	21.0	74.3	4.0	25.7	13.6	14.0
14.0	23.0	86.4	2.0	13.6	14.3	
16.0	25.0	100.0	0.0	0.0		

TOTAL STORAGE CAPACITY IN POROSITY-FEET = 210.6

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

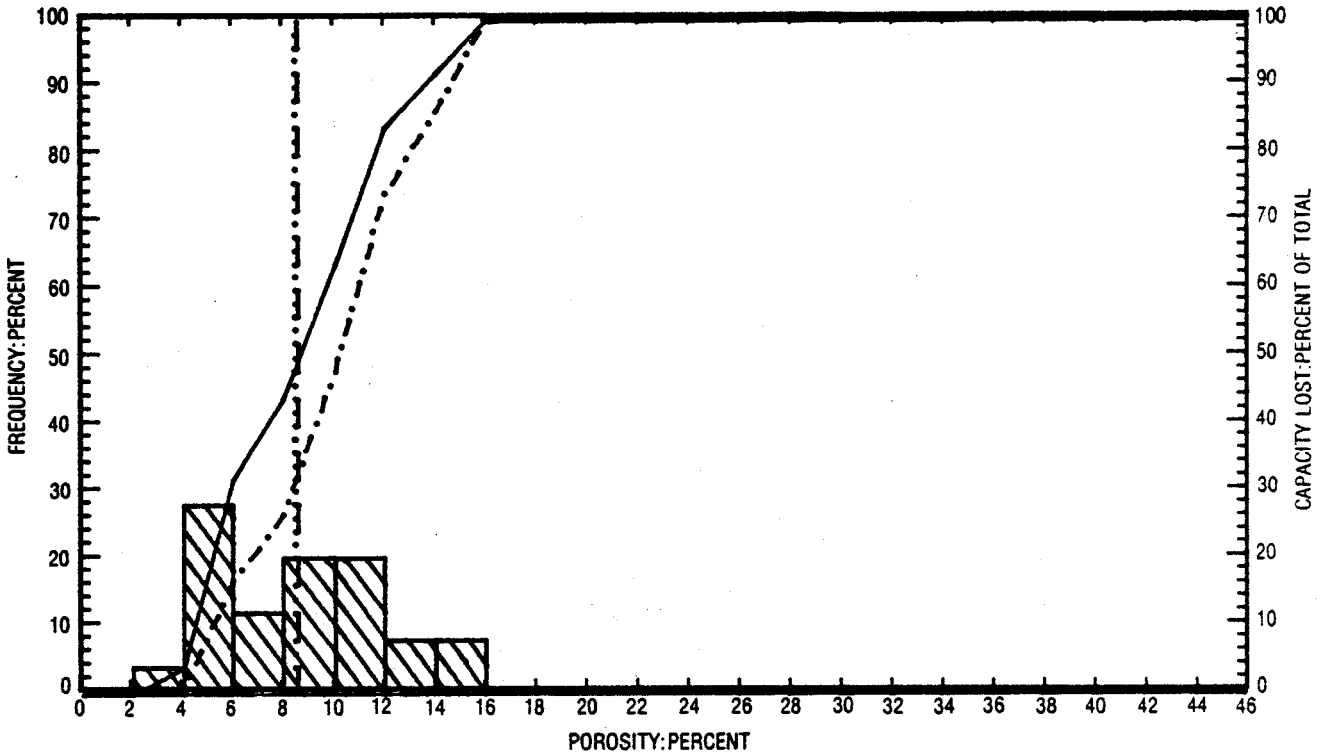
STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

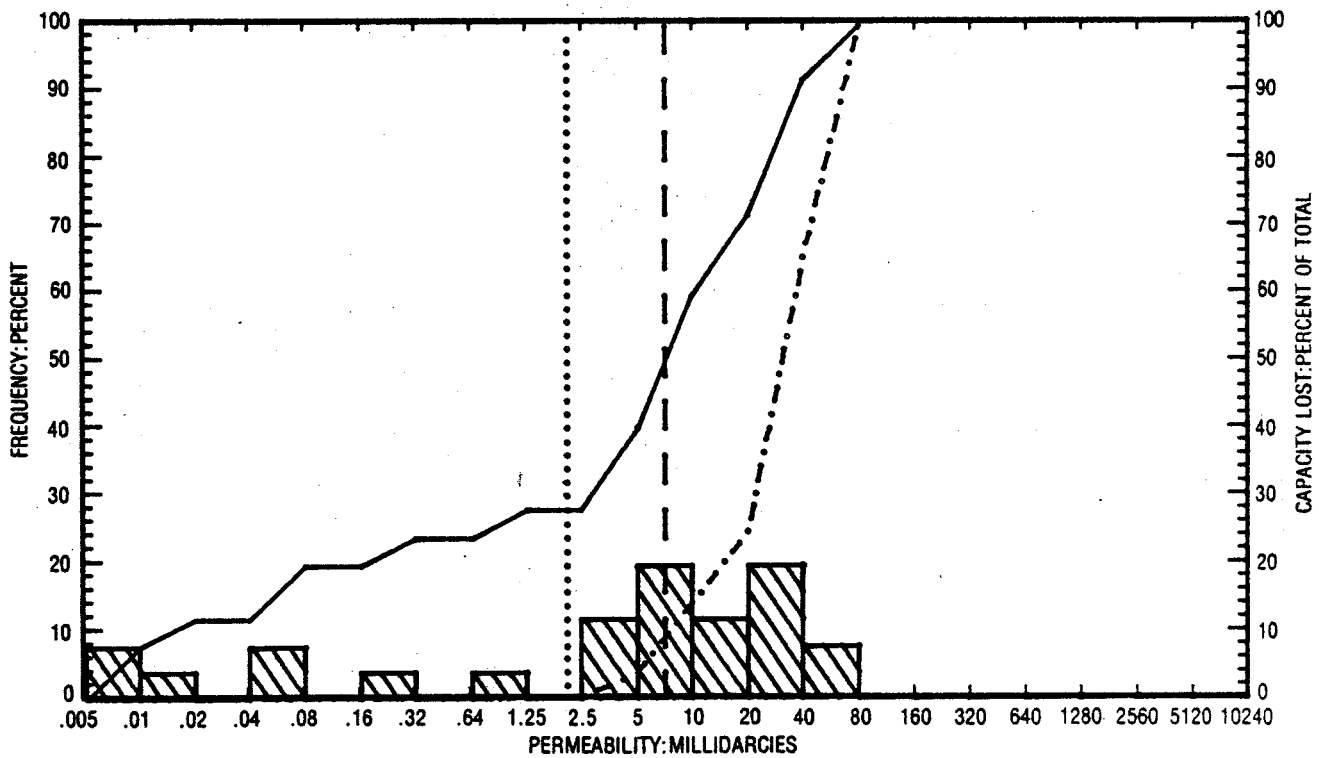
COMPANY: CELSIUS ENERGY COMPANY
FIELD : WILDCAT
WELL : PATTERSON UNIT # 9
COUNTY, STATE: SAN JUAN,UTAH

MILLIDARCY-FEET OF FLOW CAPACITY LOST FOR SELECTED PERMEABILITY CUT OFF

PERMEABILITY CUT OFF	FEET LOST	CAPACITY LOST (%)	FEET REMAINING	CAPACITY REMAINING (%)	GEOM MEAN	MEDIAN
0.005	0.0	0.0	25.0	100.0	2.06	7.07
0.010	2.0	0.0	23.0	100.0	4.91	8.12
0.020	3.0	0.0	22.0	100.0	5.25	8.71
0.039	3.0	0.0	22.0	100.0	5.25	8.71
0.078	5.0	0.0	20.0	100.0	8.45	10.00
0.156	5.0	0.0	20.0	100.0	8.45	10.00
0.312	6.0	0.1	19.0	99.9	10.24	11.22
0.625	6.0	0.1	19.0	99.9	10.24	11.22
1.250	7.0	0.4	18.0	99.6	11.69	12.60
2.500	7.0	0.4	18.0	99.6	11.69	12.60
5.	10.0	4.0	15.0	96.0	14.72	17.82
10.	15.0	14.4	10.0	85.6	22.40	26.39
20.	18.0	24.7	7.0	75.3	30.80	
40.	23.0	65.6	2.0	34.4	53.39	
80.	25.0	100.0	0.0	0.0		

TOTAL FLOW CAPACITY IN MILLIDARCY-FEET(ARITHMETIC) = 310.82





PERMEABILITY AND POROSITY HISTOGRAMS

CELSIUS ENERGY COMPANY
PATTERSON UNIT # 9
WILDCAT
SAN JUAN, UTAH

LEGEND

- ARITHMETIC MEAN POROSITY
- GEOMETRIC MEAN PERMEABILITY
- MEDIAN VALUE
- CUMULATIVE FREQUENCY
- CUMULATIVE CAPACITY LOST

Form 3160-5
November 1983)
Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.: U-18452-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: --

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

RECEIVED
SEP 24 1984
DIVISION OF OIL GAS & MINING

1. OIL WELL [XX] GAS WELL [ ] OTHER

7. UNIT AGREEMENT NAME: Patterson

2. NAME OF OPERATOR: Wexpro Company

8. FARM OR LEASE NAME: Unit

3. ADDRESS OF OPERATOR: P. O. Box 458, Rock Springs, WY 82902

9. WELL NO.: 9

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: SE SE, 615' FEL, 657' FSL

10. FIELD AND POOL, OR WILDCAT: Patterson Unit

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 33-37S-25E

14. PERMIT NO.: 43-037-31023

15. ELEVATIONS (Show whether DF, RT, GR, etc.): GR 5341' KB 5355.06'

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other) ~~Supplementary History~~			[XX]
(Other)			[ ]	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Please note that the above ground elevation and KB have been corrected.

Landed 9-5/8-inch O.D., 36-pound, K-55, 8 round thread, ST&C casing at 1614.21 feet KBM or 14.56 feet below KB, which is 0.50 feet below ground level. Cement with 400 sacks Halliburton Light cement treated with 10 pounds per sack gilsonite, 1/4 pound per sack flocele and 2% CaCl. Followed with 180 sacks Class H treated with 1/4 pound per sack flocele and 3% CaCl. Full returns throughout. Cement to surface. Bumped plug to 500 psi over last pumping pressure. Floats held okay. Cement in place at 9:00 A.M., 8-13-84.

Landed 7-inch, 26-pound, N-80 and K-55, 8 round thread, LT&C casing at 5812.91 feet KBM or 14.56 feet below KB, which is 0.50 feet below ground level. The string was landed in an 11-inch 2000 psi casing flange with full indicator weight of 112,000 pounds on the casing slips. Cemented with 800 sacks 50-50 Pozmix with 2% gel treated with 1/4 pound per sack flocele. Preceded cement with 10 barrels fresh water, 10 barrels mud flush, then 6 barrels fresh water. Two turbulent flow inducing centralizers were run, one below the Desert Creek and one below the Ismay Porosity. Bumped plug to 500 psi over the last pumping pressure (1800 psig to 2300 psig). Float held okay.

18. I hereby certify that the foregoing is true and correct

SIGNED A. J. Mauer TITLE Drilling Superintendent DATE 9-18-84

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form 3160-5
November 1983)
Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

5. LEASE DESIGNATION AND SERIAL NO.: U-18452-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: --

7. UNIT AGREEMENT NAME: Patterson

8. FARM OR LEASE NAME: Unit

9. WELL NO.: 9

10. FIELD AND POOL, OR WILDCAT: Patterson Unit

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 33-37S-25E

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

1. OIL WELL [X] GAS WELL [ ] OTHER

RECEIVED
NOV 01 1984
DIVISION OF OIL GAS & MINING

2. NAME OF OPERATOR: Wexpro Company

3. ADDRESS OF OPERATOR: P. O. Box 458, Rock Springs, WY 82902

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface: SE SE, 615' FEL, 657' FSL

14. PERMIT NO.: 43-037-31023

15. ELEVATIONS (Show whether DF, RT, GR, etc.): GR 5341' KB 5355.06'

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other) Flare gas for 30 days			[X]	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Patterson Unit No. 9 is completed in the Desert Creek formation at 5734-5739 feet KBM. The initial test (22 hours) indicated production rates of 194 BOPD, 345 MCFPD with flowing tubing pressures of approximately 770 psia. Current gas line pressures are approximately 550 psia to 600 psia. Recently a 72 hour production test was run. The last 24 hours of the test indicated the following information:

10-19-1984	Tubing Pressure:	450 psia
	Oil Volume:	254 BOPD
	Gas Volume:	131 MCF
	Water Volume:	92 BWPD

We intend to production test this well for at least 30 days to obtain stabilized tubing pressures to size possible compressors or redesign existing compressors. Initial production information indicates that compression will be necessary. By flaring the gas for 30 days, stabilized pressures can be obtained to size compressors with.

18. I hereby certify that the foregoing is true and correct

SIGNED [signature] TITLE Director, Petro. Engrg. DATE October 22, 1984

(This space for Federal or State office use)

APPROVED BY ______ TITLE ______ DATE ______
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dianne R. Nielson, Ph.D., Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

November 8, 1984

Wexpro Company
P.O. Box 458
Rock Springs, Wyoming 82902

Gentlemen:

Re: Request to Flare Gas from Patterson Unit Well No. 9, Sec. 33, T. 37S, R. 25E, San Juan County, Utah.

The Division has received and reviewed your request to flare associated gas from the above captioned well. The request must be presented for Board review and action will be taken at the next scheduled Board meeting on December 6, 1984. In the interim, the Division will allow limited gas flaring for the purposes of testing the well to determine reinjection potential.

The flaring limitation which will be allowed by the Division prior to the December Board hearing is as follows:

1. As long as the producing gas:oil ratio (GOR) for the well is less than 2000 cubic feet per barrel, the well may produce at an unrestricted rate and produced gas may be vented or flared.

2. If the GOR exceeds 2000 cubic feet per barrel, the well may produce at a restricted rate. The restricted rate allowing for (a) 100 MCF/D of gas produced or (b) gas produced equivalent to what a well with a GOR of 2000 cubic feet per barrel would produce at 100% desliverability, whichever is greater.

Please note that this flaring allowance will only be in effect until the Board determines either to docket a hearing in the matter, to restrict production or to take any other action deemed appropriate.

If you need further information concerning this approval, do not hesitate to contact this office.

Sincerely,

John R. Baza
Petroleum Engineer

cc: R.J. Firth
96840-74-75

Form 3160-5
November 1983)
Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR
Wexpro Company

3. ADDRESS OF OPERATOR
P. O. Box 458, Rock Springs, WY 82902

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
SE SE, 615' FEL, 657' FSL

5. LEASE DESIGNATION AND SERIAL NO.
U-18452-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
--

7. UNIT AGREEMENT NAME
Patterson

8. FARM OR LEASE NAME
Unit

9. WELL NO.
9

10. FIELD AND POOL, OR WILDCAT
Patterson

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
33-37S-25E

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

14. PERMIT NO.
43-037-31023

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
GR 5341' KB 5355.06'

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other) Flare Gas for 30 Days			[X]
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Patterson Unit Well No. 9 is completed in the Desert Creek formation at 5734 feet to 5739 feet KBM. Recently, we conducted a 30-day test, during which we flared the produced gas. The test indicated average stabilized flow rates of 113 barrels oil per day, 152 MCF and 12 barrels water per day on a 22/64-inch choke. The test concluded with cumulative production of 4084 barrels oil, 4719 MCF and 586 barrels water.

18. I hereby certify that the foregoing is true and correct

SIGNED Thomas M Cooley TITLE Director, Petroleum Eng. DATE 12-6-84

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

PE-0002-86

Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

091508

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

3
P

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [XX] GAS WELL [ ] OTHER

2. NAME OF OPERATOR
Wexpro Company

3. ADDRESS OF OPERATOR
P. O. Box 458, Rock Springs, Wyoming 82902

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
SE SE, 615' FEL, 657' FSL

5. LEASE DESIGNATION AND SERIAL NO.
U-18452-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
---

7. UNIT AGREEMENT NAME
Patterson

8. FARM OR LEASE NAME
Unit

9. WELL NO.
9

10. FIELD AND POOL, OR WILDCAT
Patterson

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
33-37S-25E

14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, GR, etc.)	12. COUNTY OR PARISH	13. STATE
43-037-31023	GR - 5341' KB 5355.06'	San Juan	Utah

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[X]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other)			[ ]	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

The above well is a Desert Creek Formation oil well. The well is completed from the interval of 5734-5739' KBM. The Ismay Formation was tested on a drill stem test and indicated that commercial quantities of oil and gas could be produced. The Little Nancy Well No. 3-11 is an 80 acre offset to Patterson Unit Well No. 9 and has recently been recompleted in the Ismay Formation producing oil and gas. Wexpro Company intends to perforate the Ismay interval of 5452-5462' and 5474-5516' with 2 spf and then acidize with 5500 gallons of 28% HCL. Following a short production test, the Ismay and Desert Creek Formations will be commingled for production. The effect on the participation area of commingling the Ismay and Desert Creek Formations has been dicussed with the state office of the BLM and has been agreed upon. The intention of the workover is to produce oil and gas from the Ismay Formation to protect reserves from being depleted from the offset well.

RECEIVED
SEP 11 1986
DIVISION OF
OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED Thomas M. Ahn TITLE Director of Pet. Eng. DATE September 2, 1986

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

ACCEPTED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 9-12-86
BY: John R. Baza

Federal approval of this action is required before commencing operations.

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

PE-0113-86

Form 3160-4
(November 1983)
(formerly 9-330)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE (See other instructions on reverse side)

110106

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

16

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [ ] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR. [X] Other

5. LEASE DESIGNATION AND SERIAL NO.: U-18452-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: ----

7. UNIT AGREEMENT NAME: Patterson

8. FARM OR LEASE NAME: Unit

9. WELL NO.: 9

10. FIELD AND POOL, OR WILDCAT: Patterson

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: 33-37S-25E

2. NAME OF OPERATOR: Celsius Energy Company

3. ADDRESS OF OPERATOR: P. O. Box 458, Rock Springs, Wyoming 829

RECEIVED
OCT 29 1986
DIVISION OF
OIL, GAS & MINING

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)

At surface: SE SE 615' FEL, 657' FSL

At top prod. interval reported below

At total depth

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
43-037-31023	6/12/84	San Juan	Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
8-11-84	9-5-84	9-13-84	GR 5341, KB 5355.06'	--

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
5813' MD			→	0-5813	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: Ismay

25. WAS DIRECTIONAL SURVEY MADE: No

26. TYPE ELECTRIC AND OTHER LOGS RUN: DIL, BHC, CNL/FDC

27. WAS WELL CORED: Yes

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9-5/8	36	1614	12-1/4	400 sx light, 180 sx Class H	
7	26	5813	8-3/4	800 sx 50-50 Pozmix	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (*Interval, size and number*)

5734-5739' 4 SPF
5452-5462', 5474-5502' 2 SPF

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5734-5739'	3000 gal 28% HCL
5452-5462'	
5474-5502'	5500 gal 28% HCL

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
NA		

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
10-21-86	4	26/64		60	208	0	3467

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
1675	0		384	1070	0	NA

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*): Vented for test. Will be sold when produced.

TEST WITNESSED BY: Robert Maser

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED [signature] TITLE Director Pet. Eng. DATE 10-27-86

***(See Instructions and Spaces for Additional Data on Reverse Side)**

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

84

PE-0114-86

Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT--" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

5. LEASE DESIGNATION AND SERIAL NO.: U-18452-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: ----

7. UNIT AGREEMENT NAME: Patterson

2. NAME OF OPERATOR: Celsius Energy Company

8. FARM OR LEASE NAME: Unit

3. ADDRESS OF OPERATOR: P. O. Box 458, Rock Springs, Wyoming 82902

9. WELL NO.: 9

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: SE SE 615' FEL, 657' FSL

10. FIELD AND POOL, OR WILDCAT: Patterson

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 33-37S-25E

14. PERMIT NO.: 43-037-31023

15. ELEVATIONS (Show whether DF, RT, GR, etc.): GR 5341, KB 5355.06'

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[X]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

The above captioned well was initially completed in the Desert Creek over the interval of 5734-5739' as a flowing oil well. When an offset well was completed in the Ismay Formation, Celsius requested permission to produce the Desert Creek and Ismay in order to protect reserves in the Ismay Formation. Workover operations commensed on 10-17-86. A retrievable bridge plug was set above the Desert Creek perforations and the Ismay was perforated over the interval of 5452-5462' and 5474-5502' KBM. The zone was acidized and then flow tested. The well flowed 384 BOPD and 1070 MCFPD during the flow test. It is the intent of Celsius Energy to flow the Ismay Zone until such time that the wellhead pressures decline to the point that the Desert Creek and Ismay can be commingled. Since the Desert Creek needs to be pumped, the Ismay will need to be flowed until the pressure will decline to the point that the two zones can be pumped together.

RECEIVED
OCT 29 1986

DIVISION OF
OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED [signature] TITLE Director Pet. Eng. DATE 10-27-86

(This space for Federal or State office use)

APPROVED BY ____ TITLE ____ DATE ____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR: Celsius Energy Company

3. ADDRESS OF OPERATOR: P. o. Box 458, Rock Springs, Wyoming 82902

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: SE SE, 615' FEL, 657' FSL

5. LEASE DESIGNATION AND SERIAL NO: U-18452-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 012221

7. UNIT AGREEMENT NAME: Patterson

8. FARM OR LEASE NAME: Unit

9. WELL NO.: 9

10. FIELD AND POOL, OR WILDCAT: Patterson

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 33-37S-25E

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

14. PERMIT NO.: 43-037-31003

15. ELEVATIONS (Show whether DF, RT, GR, etc.): KB 5355.06'

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			[ ]
(Other) commingle Zones		X		(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

A workover was performed in October 1986 on the above captioned well. The intent of the workover was to perforate and test the Ismay, then commingle with the Desert Creek Formation. But when the Ismay was tested, it flowed too hard to allow the Ismay and Desert Creek to be pumped together. The well has been flowed from the Ismay since the time of the workover. Now, the Ismay has declined to 300 MCFPD and 10 BOPD against 250 psi back pressure, which is low enough to allow the Ismay and Desert Creek to be commingled and pumped safely. Celsius Energy proposes to remove the retrievable bridge plug (which is above the Desert Creek) and commingle the Ismay and Desert Creek Formation.

RECEIVED
JAN 20 1987
DIVISION OF
OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED [signature] TITLE Director Pet. Eng. DATE 1-14-87

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

Federal approval of this action is required before commencing operations.

ACCEPTED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 1-21-87
BY: John R. Bay

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE (Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.: U-18452-A (POW)

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

042709

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

7. UNIT AGREEMENT NAME: Patterson

2. NAME OF OPERATOR: Celsius Energy Company

8. FARM OR LEASE NAME: Unit

3. ADDRESS OF OPERATOR: P. O. Box 458, Rock Springs, Wyoming 82902

9. WELL NO.: 9

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: SE SE, 615' FEL, 657' FSL

10. FIELD AND POOL, OR WILDCAT: Patterson

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 33-37S-25E

14. PERMIT NO.: 43-037-31023

15. ELEVATIONS (Show whether DF, RT, GR, etc.): KB 5355.06

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other) Commingle Desert Creek & Ismay			[X]
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

On 4-6-87, the bridge plug that separated the Ismay formation from the Desert Creek formation was pulled from the wellbore. Now, the Ismay perforations (5452' - 5462', 5474' - 5516' KB) are in communication with the Desert Creek perforations (5734' - 5739' KBM). Tubing was landed at 5743' KBM. Rods and pump were installed and the well was put on production. The well is currently producing 14 BO and 260 MCFPD.

RECEIVED
APR 24 1987
DIVISION OF
OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED Thomas H Cobb TITLE Director of Pet. Engineering DATE April 20, 1987

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.: U-18452-A (POW)

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: --

051127

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

RECEIVED
MAY 07 1987
DIVISION OF
OIL, GAS & MINING

1. OIL WELL [X] GAS WELL [ ] OTHER

7. UNIT AGREEMENT NAME: Patterson

2. NAME OF OPERATOR: Wexpro Company

8. FARM OR LEASE NAME: Unit

3. ADDRESS OF OPERATOR: P. O. Box 458, Rock Springs, Wyoming 82902

9. WELL NO.: 9

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: SE SE, 615' FEL, 657' FSL

10. FIELD AND POOL, OR WILDCAT: Patterson

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 33-37S-25E

14. PERMIT NO.: 43-037-31023

15. ELEVATIONS (Show whether DF, RT, GR, etc.): KB 5355.06' GR 5341'

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other) See Below			[X]	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Wexpro Company requests permission for off-lease measurement of the above-captioned well. Due to the contraction of the Patterson Unit, the measurement of this well at the Patterson Battery is no longer within the unit boundary, and is, therefore, without authorization. A facility diagram and unit map are attached for further reference. This well produces approximately 8BOPD, 7 BWPD and 262 MCFPD.

18. I hereby certify that the foregoing is true and correct

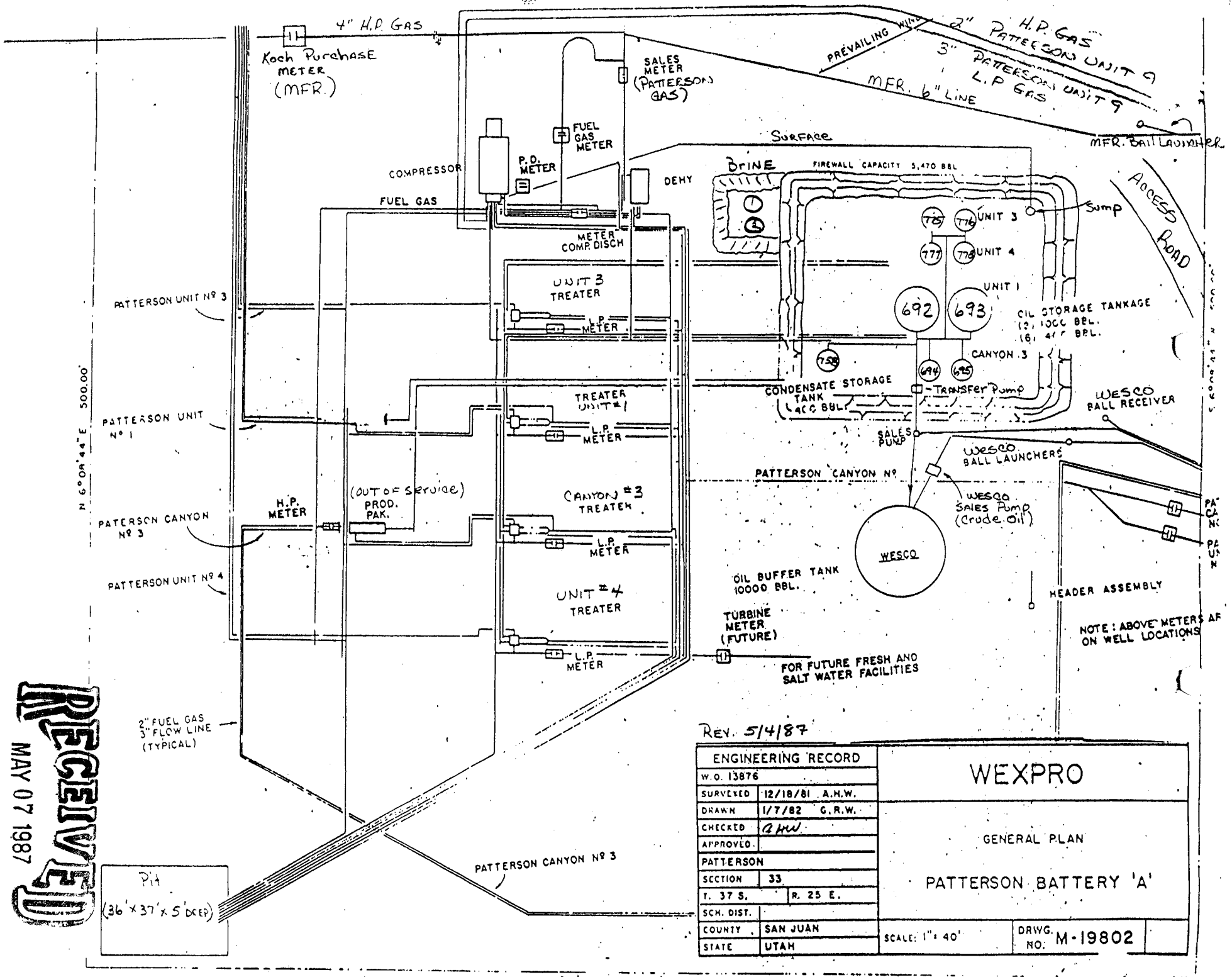
SIGNED H.K. Logan TITLE District Manager DATE May 4, 1987

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

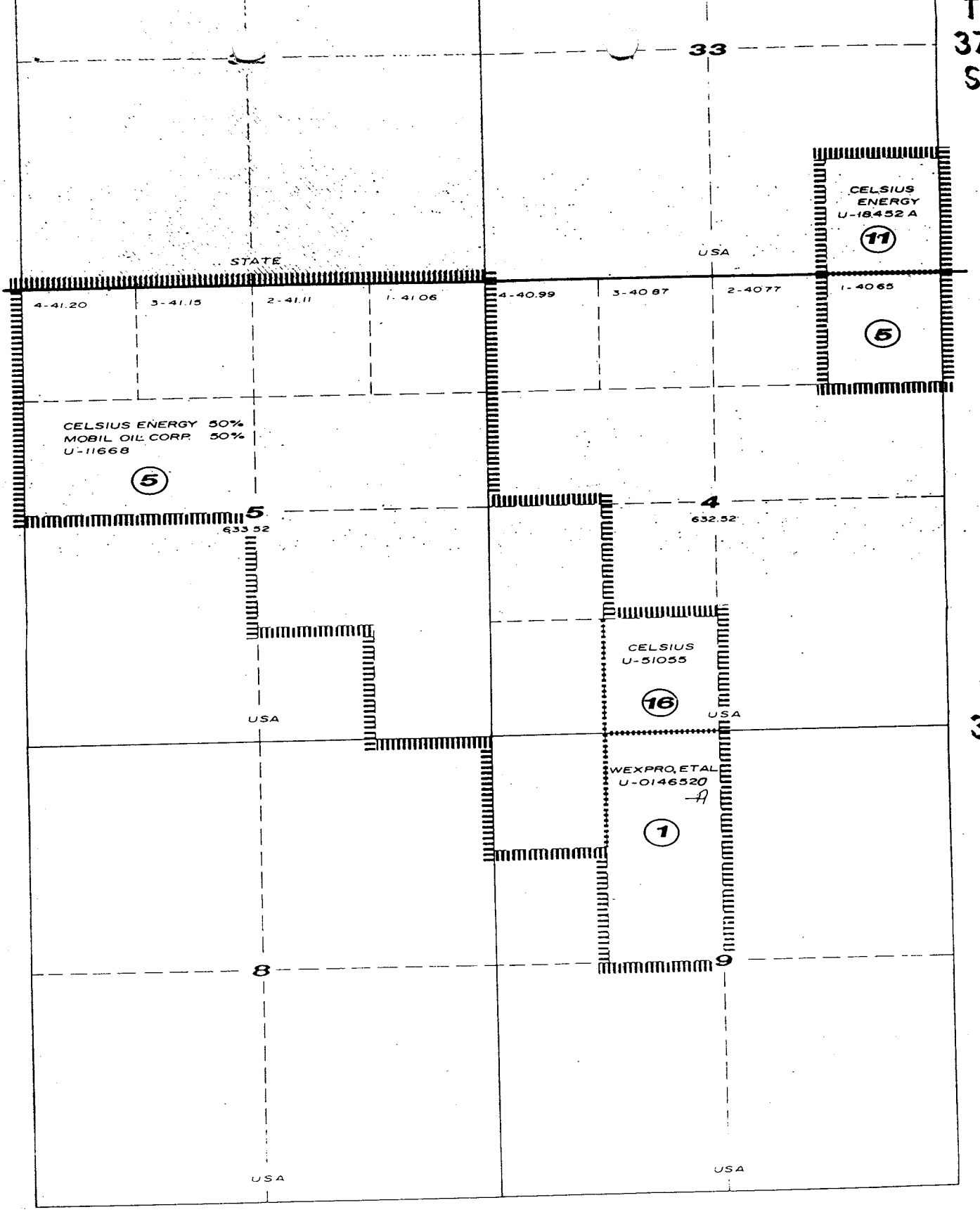
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side



REV. 5/4/87

ENGINEERING RECORD		WEXPRO
W.O. 13876		
SURVEYED	12/18/81 A.H.W.	
DRAWN	1/7/82 G.R.W.	
CHECKED	AHW	GENERAL PLAN
APPROVED		
PATTERSON		PATTERSON BATTERY 'A'
SECTION	33	
T. 37 S.	R. 25 E.	
SCH. DIST.		
COUNTY	SAN JUAN	SCALE: 1" = 40'
STATE	UTAH	DRWG. NO. M-19802



MAILED FROM THE FOLLOWING
IT LAND OFFICE SURVEY PLATS

E., JULY 28, 1923 (ALL ARE IN THE S.L.B. & M., UTAH)
E., MARCH 31, 1920

	ACRES	PERCENT
UNIT BOUNDARY	765.17	10000000
TRACT BOUNDARY AND NUMBER		
FEDERAL LANDS	765 17	100 00000
STATE LANDS		

— ABBREVIATIONS —

EXHIBIT 'A'

CONTRACTED PATTERSON UNIT

SAN JUAN COUNTY, UTAH

WEXPRO COMPANY

SALT LAKE CITY, UTAH

Form 3160-5
December 1989

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: September 30, 1990

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

RECEIVED
OCT 05 1990
DIVISION OF
OIL, GAS & MINING

5. Lease Designation and Serial No.: U-18452-A
6. If Indian, Allottee or Tribe Name: --
7. If Unit or CA, Agreement Designation: Patterson Unit
8. Well Name and No.: Patterson Unit 9
9. API Well No.: 43-037-31023 TA
10. Field and Pool, or Exploratory Area: Patterson
11. County or Parish, State: San Juan, Utah

1. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other
2. Name of Operator: Wexpro Company
3. Address and Telephone No.: P. O. Box 458, Rock Springs, WY 82902 307-382-9791
4. Location of Well (Footage, Sec., T., R., M., or Survey Description): SE SE 33-37S-25E

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[XX] Other Flare Gas	

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

On October 11, 1990, Patterson Battery Compressor is scheduled to be shut-in for routine maintenance. It is anticipated that the overhaul will be completed in four days. While the compressor is down, approximately 218 MCFPD will be vented to the atmosphere from the above well. Other wells which will be venting gas are Patterson Unit Wells No. 1, 3 and 9, and Patterson Canyon Wells No. 1 and 3. The volume of flared gas will be reported on the Monthly Report of Operations.

OIL AND GAS

DFN	RJF
JRB	GLH
DTS	SLS
3-SBH	
4-Dmt	
45 MICROFILM	
5-6 FILE	

ACCEPTED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 10/15/90
BY:

Federal approval of this action is required before commencing operations.

14. I hereby certify that the foregoing is true and correct
Signed [signature] Title District Manager Date 10/02/90

(This space for Federal or State office use)
Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT -" for such proposals

SUBMIT IN TRIPLICATE

5. LEASE DESIGNATION AND SERIAL NO.
U-18452-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
---

7. IF UNIT OR CA, AGREEMENT DESIGNATION
PATTERSON UNIT

1. TYPE OF WELL
OIL [X] WELL GAS [ ] WELL [ ] OTHER

8. WELL NAME AND NO.
PATTERSON UNIT NO. 9

2. NAME OF OPERATOR
WEXPRO COMPANY

9. API WELL NO.
43-037-31023

3. ADDRESS AND TELEPHONE NO.
P. O. BOX 458, ROCK SPRINGS, WY 82902 (307) 382-9791

10. FIELD AND POOL, OR EXPLORATORY AREA
PATTERSON

4. LOCATION OF WELL (FOOTAGE, SEC., T., R., M., OR SURVEY DESCRIPTION)
SE SE, 33-37S-25E

11. COUNTY OR PARISH, STATE
SAN JUAN, UTAH

RECEIVED
OCT 12 1993
DIVISION OF
OIL, GAS & MINING

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change in Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other FLARE GAS	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

On October 7-13, 1993, the Patterson Battery Compressor was shut-in for overhaul. While the compressor is down, approximately 175 MCFPD will be vented to the atmosphere from the above well. Other wells which will be venting gas are Patterson Unit Well Nos. 1, 3 and 9, and Patterson Canyon Well Nos. 1 and 3. The volume of flared gas will be reported on the Monthly Report of Operations. Verbal approval was granted by Eric Jones, Moab District Office.

14. I hereby certify that the foregoing is true and correct

Signed _____ Title District Superintendent Date 10/8/93

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S. C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT -" for such proposals

SUBMIT IN TRIPLICATE

5. LEASE DESIGNATION AND SERIAL NO.: U-18452-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: ---

7. IF UNIT OR CA, AGREEMENT DESIGNATION: PATTERSON UNIT

1. TYPE OF WELL: [X] OIL WELL [ ] GAS WELL [ ] OTHER

8. WELL NAME AND NO.: UNIT NO. 9

2. NAME OF OPERATOR: WEXPRO COMPANY

9. API WELL NO.: 43-037-31023

3. ADDRESS AND TELEPHONE NO.: P. O. BOX 458, ROCK SPRINGS, WY 82902 (307) 382-9791

10. FIELD AND POOL, OR EXPLORATORY AREA: PATTERSON

4. LOCATION OF WELL (FOOTAGE, SEC., T., R., M., OR SURVEY DESCRIPTION)

11. COUNTY OR PARISH, STATE: SAN JUAN, UTAH

SE, SE, 33-37S-25E

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change in Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other FLARE GAS	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

On November 27, 1995, Questar Pipeline Company shut-in their pipeline. While the pipeline is down, approximately 300 MCFPD will be vented to the atmosphere from the following wells: Patterson Unit Well Nos. 1,3, and 9 and Patterson Canyon Well No. 3 The volume of flared gas will be reported on the Monthly Report of Operations. Verbal approval was granted by Eric Jones, Moab District Office. The pipeline is scheduled to be turned on December 1, 1995.

14. I hereby certify that the foregoing is true and correct

Signed _____ Title Operations Manager Date 11/27/95

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____

Conditions of approval, if any:

Title 18 U.S. C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Form 3160-5
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DEPARTMENT OF THE INTERIOR
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Use "APPLICATION FOR PERMIT -" for such proposals

SUBMIT IN TRIPLICATE

RECEIVED
DEC 01 1995
DIV. OF OIL, GAS & MINING

5. LEASE DESIGNATION AND SERIAL NO.
U-18452-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
---

7. IF UNIT OR CA, AGREEMENT DESIGNATION
PATTERSON UNIT

1. TYPE OF WELL
OIL [X] WELL GAS [ ] WELL [ ] OTHER

8. WELL NAME AND NO.
UNIT NO. 9

2. NAME OF OPERATOR
WEXPRO COMPANY

9. API WELL NO.
43-037-31023

3. ADDRESS AND TELEPHONE NO.
P. O. BOX 458, ROCK SPRINGS, WY 82902 (307) 382-9791

10. FIELD AND POOL, OR EXPLORATORY AREA
PATTERSON

4. LOCATION OF WELL (FOOTAGE, SEC., T., R., M., OR SURVEY DESCRIPTION)

11. COUNTY OR PARISH, STATE
SAN JUAN, UTAH

SE, SE, 33-37S-25E

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TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change in Plans
	[ ] Recompletion	[ ] New Construction
[ ] Subsequent Report	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
[ ] Final Abandonment Notice	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other FLARE GAS	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

On November 27, 1995, Questar Pipeline Company shut-in their pipeline. While the pipeline is down, approximately 300 MCFPD will be vented to the atmosphere from the following wells: Patterson Unit Well Nos. 1,3, and 9 and Patterson Canyon Well No. 3 The volume of flared gas will be reported on the Monthly Report of Operations. Verbal approval was granted by Eric Jones, Moab District Office. The pipeline is scheduled to be turned on December 1, 1995.

14. I hereby certify that the foregoing is true and correct

Signed _____ Title Operations Manager Date 11/27/95

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____

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*See Instruction on Reverse Side

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155

July 14, 1997

Celsius Energy Company
Attn: Garth Berkeland
1331 Seventeenth Street, Suite 800
Denver, Colorado 80202

Re: Sub-Operating Agreement
Patterson Unit
Desert Creek-Ismay PA "A"
San Juan County, Utah

Gentlemen:

We have received a copy of a "Sub-Operating Agreement" executed by Wexpro Company, Unit Operator of the Patterson Unit Agreement, San Juan County, Utah, and by Celsius Energy Company dated January 1, 1997. This agreement makes Celsius Energy Company the Sub-Operator as to the Desert Creek-Ismay Participating Area "A" for those lands within the participating area.

Inasmuch as it appears that operations conducted under the terms of this sub-operating agreement will be conducted subject to the terms of the Patterson Unit and Unit Operating Agreement, the sub-operating agreement is accepted for the record and is being distributed to the appropriate Federal Offices. However, it is expressly understood and agreed that nothing in the sub-operating agreement shall be construed or shall operate to relieve Wexpro Company as Unit Operator from its obligations and responsibilities under the Patterson Unit Agreement. To the extent that the "Sub-Operating Agreement" is inconsistent with the terms and conditions of the Patterson Unit Agreement, such terms and conditions of said unit agreement shall prevail.

Pursuant to regulations issued and effective June 17, 1988, all operations within the "sub-operating zone" will be covered by your nationwide (Eastern States) oil and gas bond No. 0019.

Sincerely,

/s/ Robert A. Henricks

Robert A. Henricks
Chief, Branch of Fluid Minerals

Enclosure
cc: Wexpro Company
bcc: Moab District Office
Patterson Unit
Division Oil, Gas & Mining
Minerals Adjudication Section
Agr. Sec. Chron
Fluid Chron
UT931:TAThompson:tt:7/14/97

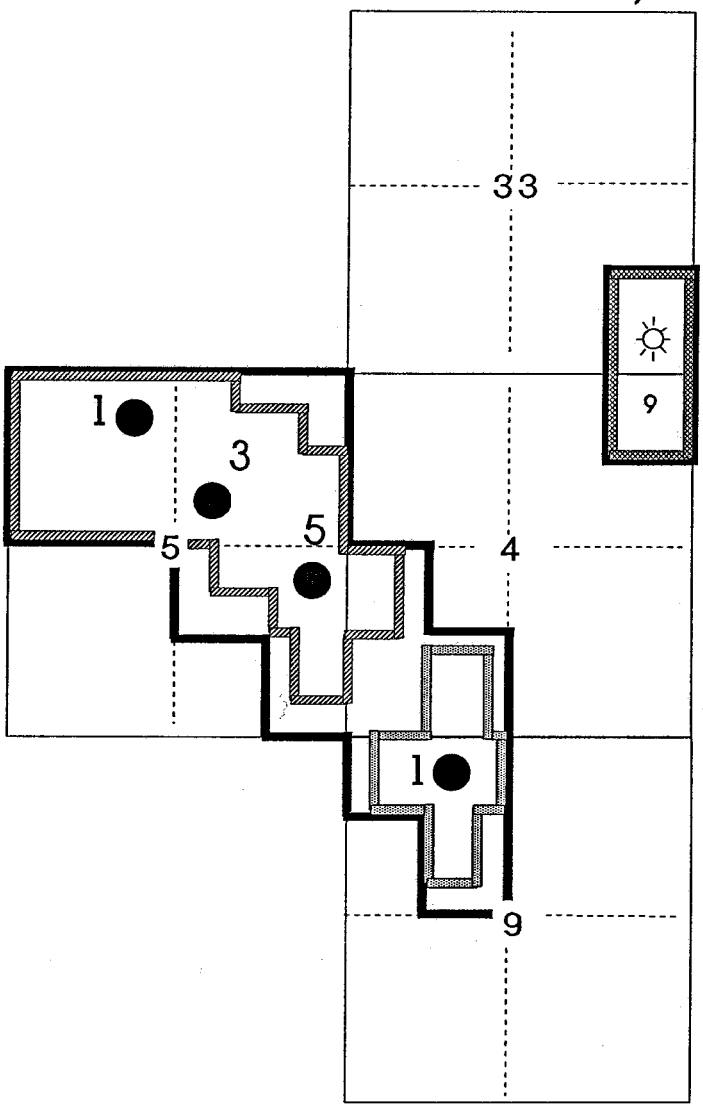
07/14/97

Well Status Report
Utah State Office
Bureau of Land Management

Lease	Api Number	Well Name	QTR	Section	Township	Range	Well Status	Operator
** Inspection Item: 891018033B								
UTU18452A	4303731023	9 PATTERSON UNIT	SESE	33	T37S	R25E	POW	WEXPRO COMPANY

PATTERSON UNIT
San Juan County, Utah

EFFECTIVE: NOVEMBER 30, 1979



UNIT OUTLINE (UTU63063X)

DESERT CREEK-ISMAY PA "A"

ISMAY PA

ISMAY PA "B"

AS CONTRACTED APRIL 26, 1985

765.17 ACRES

DSRT CRK-ISMY PA A ALLOCATION
FEDERAL 100.00%
70.65 Acres

ISMAY PA ALLOCATION
FEDERAL 100.00%
362.91 Acres

ISMAY PA "B" ALLOCATION
FEDERAL 100.00%
80.00 Acres

RECEIVED
AUG 26 1997
DIV. OF OIL, GAS & MINING

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
☐ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
CELSIUS ENERGY COMPANY

3. Address and Telephone No.
1331 17th Street, Suite 800, Denver, CO 80202 303-672-6970

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SESE Section 33, T37S, R25E

5. Lease Designation and Serial No.
891018033B

6. If Indian, Allottee or Tribe Name
NA

7. If Unit or CA, Agreement Designation
Patterson Unit

8. Well Name and No.
Patterson Unit #9

9. API Well No.
43-037-31023

10. Field and Pool, or Exploratory Area
Patterson

11. County or Parish, State
San Juan, UT

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☐ Other Designation of Sub-Operator	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Wexpro Company, as operator of the Patterson Unit, has delegated Celsius Energy Company as sub-operator of the Patterson Unit #9 in Desert Creek/Ismay Commingled Participating Area "A", Patterson Unit Agreement No. 14-08-0001-18033, effective January 1, 1997.

14. I hereby certify that the foregoing is true and correct

Signed _____ Title Administrative Supervisor Date August 21, 1997

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

***See Instruction on Reverse Side**

Jay Nease

WEXPRO COMPANY
79 SOUTH STATE STREET • P O BOX 11070 • SALT LAKE CITY, UTAH 84147 • PHONE (801) 530-2600

January 30, 1997

Bureau of Land Management
Branch of Fluid Minerals
324 S. State, Suite 301
P. O. Box 45155
Salt Lake City, Utah 84145-0155

RE: *Designation of Sub-Operator*
Patterson Unit
Desert Creek/Ismay Commingled
Participating Area "A"
San Juan County, Utah
Unit Agreement No. 14-08-0001-18033

Gentlemen:

Wexpro Company, the current operator of the Patterson Unit, wishes to delegate Celsius Energy Company as sub-operator of the above referenced participating area within the Patterson Unit.

Enclosed please find three (3) copies of our executed Designation of Sub-Operator Letter. Upon approval, please furnish an approved copy in care of the undersigned. Should you have any questions, please contact the undersigned at (801) 324-2611.

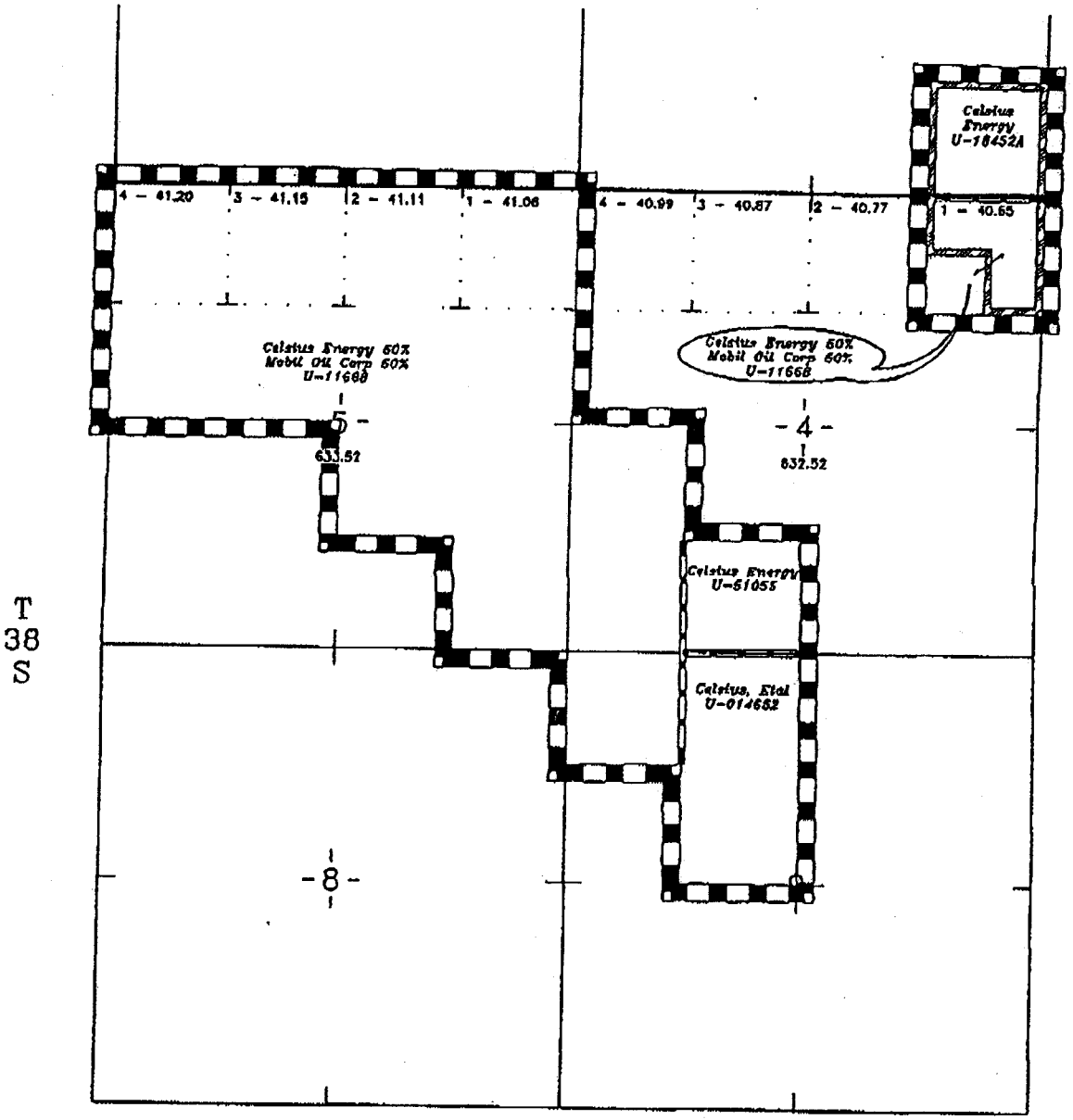
Yours truly,

D. J. Quinn, Coordinator
Units and Joint Operations

slt

Enclosure

units/pattsubo.ltr



Legend:

UNIT BOUNDARY 755.17 acres 100.00% Federal lands

TRACT BOUNDARY

PARTICIPATING AREA "A" FOR THE DESERT CREEK / ISMAY COMMINGLED FORMATIONS.

Wexpro Company

PATTERSON UNIT
SAN JUAN COUNTY, UTAH

0 1/2
Mile Scale

Computer Drafted January, 1997

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Patterson Unit Agreement
Desert Creek - Ismay Formations
Participating Area "A"

DESIGNATION OF SUB-OPERATOR

Bureau of Land Management
Branch of Fluid Minerals
Salt Lake City, Utah

The undersigned, WEXPRO COMPANY, is the appointed, approved and Acting Operator under the Patterson Unit Agreement effective October 10, 1979, Contract No. 14-08-0001-18033, as contracted, effective April 26, 1985, covering 765.17 acres, more or less, in San Juan County, Utah, located in Townships 37 South and 38 South, Range 25 East, all as more definitely appears from the Unit Agreement on file with the Department of the Interior.

WEXPRO COMPANY hereby designates CELSIUS ENERGY COMPANY, a corporation, as its Sub-Operator for the conduct of all operations on the Unit Area only as to the Desert Creek/Ismay commingled Participating Area "A", approved effective October 21, 1986. This Sub-Operator covers the productive Desert Creek and Ismay formations within the boundaries of said Unit Area, hereby conferring on CELSIUS ENERGY COMPANY all of the rights, benefits and privileges of the Unit Operator; subject, however, to the duties, obligations and liabilities of such Unit Operator under the above-described Unit Agreement to the extent that they apply to all operations as to the remaining lands and participating areas. Celsius Energy Company is delegated full authority to act in behalf of the Unit Operator in complying with the terms of the Unit Agreement, the underlying leases and the regulations applicable thereto, and on whom the Authorized Officer of the Bureau of Land Management under the authority vested in the Secretary of Interior, under the act approved February 25, 1920, 41 Stat. 437, as amended, 30 U.S.C. Secs. 181, et seq. and delegated to the Assistant District Manager, Division of Mineral Resources, Bureau of Land Management, under the authority of 43 CFR 3180, or representative may serve written or oral instructions in securing compliance with the oil and gas regulations as to the Desert Creek/Ismay commingled Participating Area "A" with respect to operations to be so conducted within the boundaries of the above-described Unit Area.

It is specifically understood that this designation of Sub-Operator does not relieve the Operator (or Sub-Operator to the extent of this designation) of responsibility of compliance with the terms of the Unit Agreement, the underlying leases and the Patterson Unit Operating Agreement.

This Designation of Sub-Operator does not constitute an assignment or any interest in the underlying leases.

In the case of default on the part of the designated Sub-Operator, the Unit Operator will promptly comply with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

Executed, this 29th day of January, 1997, but effective January 1, 1997.

WEXPRO COMPANY

By: _____
G. L. Nordloh
Title: President and C.E.O.

ACKNOWLEDGEMENT

STATE OF UTAH)
) ss.
COUNTY OF SALT LAKE)

On the 29th day of January, 1997, personally appeared before me, Gary L. Nordloh, who, being by me duly sworn, did say that he is the President of WEXPRO COMPANY, and that said instrument was signed in behalf of said corporation a Utah corporation, and that said instrument was signed in behalf of said corporation.

Jodi Starley
Notary Public

My Commission Expires:
10/5/99

Residing at Salt Lake County

NOTARY PUBLIC
JODI STARLEY
79 So. State Street
Salt Lake City, Utah 84111
My Commission Expires
October 5, 1999
STATE OF UTAH

APPROVED THIS ____ day of _____, 19___

Dated: _____

Chief, Branch of Fluid Minerals
Bureau of Land Management
Salt Lake City, Utah

Contract Number 14-08-0001-18033

document/desigsub.pat

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET

Routing:	
1-LEC	6-LEC
~~2-GLH~~	7-KAS
3-DTS/DLS	8-SI
4-VLD	9-FILE
5-JRB	

Attach all documentation received by the division regarding this change.
Initial each listed item when completed. Write N/A if item is not applicable.

XXX Change of Operator (well sold) ☐ Designation of Agent
☐ Designation of Operator ☐ Operator Name Change Only

The operator of the well(s) listed below has changed, **effective:** 1-1-97

TO: (new operator)	CELSIUS ENERGY COMPANY	**FROM:** (old operator)	WEXPRO COMPANY
(address)	1331 17TH ST #800	(address)	PO BOX 11070
	DENVER CO 80202-1558		SALT LAKE CITY UT 84147
	JANE SEILER		
	Phone: (303)296-8945		Phone: (801)530-2806
	Account no. N4850		Account no. N1070

WELL(S) attach additional page if needed: *PATTERSON UNIT/DSCR-ISMY "A" PA

Name:	PATTERSON UNIT 9	API:	43-037-31023	Entity:	1072	S	33	T	37S	R	25E	Lease:	UTU18452A
Name:		API:		Entity:		S		T		R		Lease:	
Name:		API:		Entity:		S		T		R		Lease:	
Name:		API:		Entity:		S		T		R		Lease:	
Name:		API:		Entity:		S		T		R		Lease:	
Name:		API:		Entity:		S		T		R		Lease:	
Name:		API:		Entity:		S		T		R		Lease:	

OPERATOR CHANGE DOCUMENTATION

Lec 1. (r649-8-10) Sundry or other legal documentation has been received from the **FORMER** operator (attach to this form). (Req. 7-15-97) (Rec'd 8-21-97)

Lec 2. (r649-8-10) Sundry or other legal documentation has been received from the **NEW** operator (Attach to this form). (Req. 7-15-97) (Rec'd 8-21-97)

N/A 3. The **Department of Commerce** has been contacted if the new operator above is not currently operating any wells in Utah. Is the company **registered with the state?** (yes/no) _____ If yes, show company file number: _____.

Lec 4. **FOR INDIAN AND FEDERAL WELLS ONLY.** The BLM has been contacted regarding this change. Make note of BLM status in comments section of this form. BLM approval of **Federal** and **Indian** well operator changes should ordinarily take place prior to the division's approval, and before the completion of **steps 5 through 9** below.

Lec 5. Changes have been entered in the **Oil and Gas Information System** (3270) for each well listed above. (8-22-97)

Lec 6. **Cardex** file has been updated for each well listed above. (8-22-97)

Lec 7. Well **file labels** have been updated for each well listed above. (8-22-97)

Lec 8. Changes have been included on the monthly "Operator, Address, and Account Changes" **memo** for distribution to Trust Lands, Sovereign Lands, UGS, Tax Commission, etc. (8-22-97)

Lec 9. A folder has been set up for the **Operator Change file**, and a copy of this page has been placed there for reference during routing and processing of the original documents.

OPERATOR CHANGE WORKSHEET (continued) - Initial each item when completed. Write N/A if item is not applicable.

ENTITY REVIEW

LC 1. (r649-8-7) **Entity assignments have been reviewed** for all wells listed above. Were entity changes made? (yes/no) ____ If entity assignments were changed, attach copies of Form 6, Entity Action Form.

N/A 2. Trust Lands, Sovereign Lands, Tax Commission, etc., have been **notified** through normal procedures of entity changes.

BOND VERIFICATION - (FEE WELLS ONLY)

N/A/LC 1. (r649-3-1) The **NEW** operator of any fee lease well listed above has furnished a proper bond.

__ 2. A **copy of this form** has been placed in the new and former operator's bond files.

__ 3. The **FORMER** operator has requested a release of liability from their bond (yes/no) ____, as of today's date _____. If yes, division response was made to this request by letter dated _____.

LEASE INTEREST OWNER NOTIFICATION OF RESPONSIBILITY

N/A 1. Copies of documents have been sent on _____ to _____ at Trust Lands for changes involving State leases, in order to remind that agency of their responsibility to review for proper bonding.

BTS 5/25/97

N/A 2. (r649-2-10) The former operator of any fee lease wells listed above has been contacted and informed by letter dated _____ 19 __, of their responsibility to notify all interest owners of this change.

FILMING

VB 1. All attachments to this form have been **microfilmed**. Today's date: 8.28.97.

FILING

__ 1. **Copies** of all attachments to this form have been filed in each **well file**.

__ 2. The **original of this form**, and the **original attachments** are now being filed in the Operator Change file.

COMMENTS

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

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Use "APPLICATION FOR PERMIT -" for such proposals

SUBMIT IN TRIPLICATE

5. LEASE DESIGNATION AND SERIAL NO.
U-18452-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. IF UNIT OR CA, AGREEMENT DESIGNATION

1. TYPE OF WELL
OIL [X] WELL GAS [ ] WELL [ ] OTHER

8. WELL NAME AND NO.
Patterson Unit No. 9

2. NAME OF OPERATOR
CELSIUS ENERGY COMPANY

9. API WELL NO.
43-037-31023

3. ADDRESS AND TELEPHONE NO.
1331 SEVENTEENTH STREET, SUITE 800, DENVER, CO 80202

10. FIELD AND POOL, OR EXPLORATORY AREA
Little Nancy

4. LOCATION OF WELL (FOOTAGE, SEC., T., R., M., OR SURVEY DESCRIPTION)
615' FEL, 657' FSL, SE/4SE/4 Sec. 33, T-37S-R25E

11. COUNTY OR PARISH, STATE
San Juan, Utah

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change in Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[ ] Other _____	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

The subject well is a commingled Desert Creek and Ismay producer that, until recently was being pumped at a rate of 120mcfd, 7 BOPD and 45 BWPD. Due to the high trucking and disposal cost of the produced water, the pumping unit was shut-down and the well flowed Ismay gas at the rate of 150 mcfd. Due to the high cost of lifting and disposal, it is recommended to set a CIBP over the Desert Creek interval @ +/- 5700' (Desert Creek perforations at 5734'-5739') and abandon this un-economical formation. The tubing will be re-run and the well put back on production producing from the Ismay formation.

RECEIVED
AUG 31 1998
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct

Signed Gary Gilmore Title Operations Engineer Date 7-29-98

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

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*See Instruction on Reverse Side

Form OGC-1b

SUBMIT IN TRIPLICATE* (other instructions on reverse side)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

5. LEASE DESIGNATION AND SERIAL NO.: ~~01072~~ U-18452A

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1. OIL WELL ☐ GAS WELL ☐ OTHER

7. UNIT AGREEMENT NAME:

2. NAME OF OPERATOR: QUESTAR EXPLORATION AND PRODUCTION COMPANY

8. FARM OR LEASE NAME: Patterson

3. ADDRESS OF OPERATOR: 1331 - 17th Street, Suite 800, Denver, CO 80202

9. WELL NO.: 9

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface

10. FIELD AND POOL, OR WILDCAT: Patterson Unit

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 33-T37S-R25E

14. PERMIT NO.: 4303731023

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

12. COUNTY OR PARISH: San Juan

13. STATE: UT

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other) CHANGE OF OPERATOR NAME			XX
(Other)	☐			(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Effective April 1, 1999, Celsius Energy Company has merged into Questar Exploration and Production Company. Merger documentation and bond information will be filed with the Utah Division of Oil, Gas & Mining by Questar Corporate offices. Questar Exploration and Production will be responsible for compliance under the lease terms and conditions for that portion of the lease associated with this notice as of April 1, 1999.

RECEIVED
MAY - 5 1999
DIV. OF OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED Jane Seiler TITLE Admin. Supervisor DATE 4-12-99

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155

In Reply Refer To:
3106
SL-026100A
(UT-932)

JUN 2 9 1999

NOTICE

Questar Exploration and Production Co. 1331 Seventeenth Street, Suite 800 Denver, CO 80202	:	Oil and Gas

Merger Recognized
Name Change Recognized

Acceptable evidence has been filed in this office concerning the merger of Celsius Energy Company into Questar Exploration and Production Company with Questar Exploration Company being the surviving entity.

Acceptable evidence has been received in this office concerning the change of name of Universal Resources Corporation to Questar Exploration and Production Company on Federal oil and gas leases.

For our purposes the merger is recognized effective April 9, 1999, and the name change is recognized effective March 26, 1999.

The oil and gas lease files identified on the enclosed exhibits have been noted as to the merger and name change. The exhibits were compiled from lists supplied by Questar Exploration and Production Company. We have not adjudicated the case files to determine if the entities affected by the merger and name change hold an interest in the leases identified, nor have we attempted to identify leases where the entities are the operator on the ground, maintaining no vested record title or operating rights interest. We are notifying the Minerals Management Service and all applicable BLM offices of the merger and name change by a copy of this notice. If additional documentation for a change of operator are required by our Field Offices, you will be contacted by them.

By recognition of the merger and the name change the principal on bonds held by Celsius and Universal are automatically changed to Questar Exploration and Production Company. Nationwide bond ES 0019 is providing coverage for Questar Exploration and Production Company.

/s/ Robert Lopez

Robert Lopez
Group Leader,
Minerals Adjudication Group

Enclosures
1. Universal Exhibit of Leases
2. Celsius Exhibit of Leases

cc: Moab Field Office
Vernal Field Office
MMS–Reference Data Branch, MS 3130, P.O. Box 5860, Denver, CO 80217
State of Utah, DOGM, Attn: Kristen Risbeck (Ste. 1210) Box 145801, SLC, UT 84114-5801
Irene Anderson (UT-932)
Teresa Thompson (UT-931)

Division of Oil, Gas and Mining

ROUTING:

1-GLH	4-KAS ✓
2-~~CDW~~ ✓	5-~~KDR~~ ✓
3-JLT	6-FILE

OPERATOR CHANGE WORKSHEET

Check each listed item when completed. Write N/A if item is not applicable.

Change of Operator (Well Sold) ☐ Designation of Agent

☐ Operator Name Change Only **X Merger**

The operator of the well(s) listed below has changed, **effective**: **4-1-99**

TO:(New Operator) QUESTAR EXPL & PROD CO
Address: 1331 17TH ST. STE 800
DENVER, CO 80202-1559
JANE SEILER
Phone: 1-(303) 672-6970
Account No. N5085

FROM:(Old Operator) CELSIUS ENERGY COMPANY.
Address: 1331 17TH ST. STE 800
DENVER, CO 80202-1559
JANE SEILER
Phone: 1-(303)-672-6970
Account No. N4850

WELL(S): **CA No.** N/A or **PATTERSON** **Unit**

Name: PATTERSON 9	API: 43-037-31023	Entity: 1070	S 33	T 37S	R 25E	Lease: U-18452A
Name:	API:	Entity:	S	T	R	Lease:
Name:	API:	Entity:	S	T	R	Lease:
Name:	API:	Entity:	S	T	R	Lease:
Name:	API:	Entity:	S	T	R	Lease:
Name:	API:	Entity:	S	T	R	Lease:
Name:	API:	Entity:	S	T	R	Lease:

OPERATOR CHANGE DOCUMENTATION

YES 1. **Has new operator change been logged in?**

YES 2. (R649-8-10) Sundry or other legal documentation has been received from the **FORMER** operator on 5-5-99 .

YES 3. (R649-8-10) Sundry or other legal documentation has been received from the **NEW** operator on 5-5-99 .

YES 4. The new company has been looked up in the **Department of Commerce, Division of Corporations Database** if the new operator above is not currently operating any wells in Utah. Is the operator registered with the State?
Yes/No If yes, the company file number is 091212 , Division letter was mailed to the new operator on _____.

YES 5. **Federal and Indian Lease Wells.** The BLM or the BIA has approved the merger, name change or operator change for all wells listed above involving Federal or Indian leases on 4-9-99 .

YES 6. **Federal and Indian Units.** The BLM or the BIA has approved the successor of unit operator for all wells listed above involving unit operations on 4-9-99 .

N/A 7. **Federal and Indian Communitization Agreements ("CA").** The BLM or the BIA has approved the operator change for all wells listed above involved in the CA on _____.

-OVER-

N/A 8. **Underground Injection Co[illegible] ("UIC") Program.** The Division has appr[illegible] UIC Form 5, Transfer of Authority to Inject, for the enhanced/secondary recovery unit/project and/or for the water disposal well(s) listed above.

YES 9. Changes have been entered in the **Oil and Gas Information System** for each well listed on 4-13-00.

YES 10. Changes have been included on the **Monthly Operator Change letter** on 4-13-00.

STATE BOND VERIFICATION

N/A 1. State Well(s) covered by Bond No. _____.

FEE WELLS - BOND VERIFICATION / LEASE INTEREST OWNER NOTIFICATION

N/A 1. (R649-3-1) The **NEW** operator of any fee lease well(s) listed above has furnished a proper bond.

N/A 2. A **copy of this form** has been placed in the **new and former operator's bond files** on _____.

N/A 3. The **FORMER** operator has requested a release of liability from their bond as of todays date _____? If yes, Division response was made to this request by letter dated _____. (see bond file).

N/A 4. (R649-2-10) The **Former** operator of any Fee lease wells listed above has been contacted and informed by letter dated _____, of their responsibility to notify all interest owners of this change.

FILMING

✓ 1. All attachments to this form have been **microfilmed** on APR 24 2001.

FILING

_____ 1. **Originals/Copies** of all attachments pertaining to each individual well have been filed in each **well file**.

_____ 2. The **original of this form** has been filed in the operator file and a copy in the old operator file.

COMMENTS

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET

ROUTING
1. DJJ
2. CDW

X Change of Operator (Well Sold) Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective: **1/2/2006**

FROM: (Old Operator):	**TO:** (New Operator):
N5085-Questar Exploration and Production	N2355-Seeley Oil Company, LLC
PO Box 458	PO Box 9105
Rock Springs, WY 82902	Salt Lake City, UT 84109
Phone: 1 (307) 382-9791	Phone: 1 (801) 467-6419

CA No. **Unit:** **PATTERSON**

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
PATTERSON U 9	33	370S	250E	4303731023	1072	Federal	OW	S

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 3/6/2006
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 3/15/2006

3. The new company was checked on the **Department of Commerce, Division of Corporations Database on:** 6/13/2006
4. Is the new operator registered in the State of Utah: YES Business Number: 5260313-0160
5. If **NO**, the operator was contacted contacted on:

6a. (R649-9-2)Waste Management Plan has been received on: Requested 6/13/06
6b. Inspections of LA PA state/fee well sites complete on: n/a
6c. Reports current for Production/Disposition & Sundries on: ok

7. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM 5/5/2006 BIA n/a

8. **Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: 5/5/2006

9. **Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: n/a

10. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject,** for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: n/a

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 6/13/2006
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 6/13/2006
3. Bond information entered in RBDMS on: n/a
4. Fee/State wells attached to bond in RBDMS on: n/a
5. Injection Projects to new operator in RBDMS on: n/a
6. Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: UT0692
2. Indian well(s) covered by Bond Number: n/a
3. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number n/a

a. The **FORMER** operator has requested a release of liability from their bond on: n/a
The Division sent response by letter on: n/a

LEASE INTEREST OWNER NOTIFICATION:

4. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

COMMENTS:

FORM 9

STATE OF UTAH

DIVISION OF OIL, GAS AND MINING

5. Lease Designation and Serial Number: UTU-18452A

6. If Indian, Allottee or Tribe Name:

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells. Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

7. Unit Agreement Name: Patterson Canyon

1. Type of Well: OIL [X] GAS [ ] OTHER:

8. Well Name and Number: Patterson Canyon U9

2. Name of Operator: SEELEY OIL COMPANY, LLC N2880

9. API Well Number: 43-037-31023

3. Address and Telephone Number: P. O. Box 9105, Salt Lake City, UT 84109 (801) 467-6419

10. Field and Pool, or Wildcat: Patterson Canyon

4. Location of Well

Footages:

County: San Juan

QQ, Sec., T., R., M.: SESE - Sec. 33, T37S,R23E

State: Utah

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT (Submit in Duplicate)		SUBSEQUENT REPORT (Submit Original Form Only)	
[ ] Abandon	[ ] New Construction	[ ] Abandon *	[ ] New Construction
[ ] Repair Casing	[ ] Pull or Alter Casing	[ ] Repair Casing	[ ] Pull or Alter Casing
[ ] Change of Plans	[ ] Recomplete	[ ] Change of Plans	[ ] Reperforate
[ ] Convert to Injection	[ ] Reperforate	[ ] Convert to Injection	[ ] Vent or Flare
[ ] Fracture Treat or Acidize	[ ] Vent or Flare	[ ] Fracture Treat or Acidize	[ ] Water Shut-Off
[ ] Multiple Completion	[ ] Water Shut-Off	[ ] Other Change of Operator	
[ ] Other			
Approximate date work will start		Date of work completion	

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION REPORT AND LOG form.

* Must be accompanied by a cement verification report.

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Seeley Oil Company, LLC is considered to be the operator of the above referenced well, Lease UTU-18452A, San Juan County, Utah, and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond coverage is provided by Utah Federal Bond UT0692.

13.

Name & Signature: B. K. Seeley Title: President Date: 2/28/06

(This space for State use only)

APPROVED 6/13/06

Earlene Russell

Division of Oil, Gas and Mining

Earlene Russell, Engineering Technician

(See Instructions on Reverse Side)

RECEIVED

MAR 0 6 2006

DIV. OF OIL, GAS & MINING

(4/94)

Form 3160- 5
(September 2001)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004- 0135
Expires: January 31,2004

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

5. Lease Serial No.: U-18452-A
6. If Indian, Allottee, or Tribe Name: N/A
7. If Unit or CA. Agreement Designation: Patterson
8. Well Name and No.: Patterson Unit 9
9. API Well No.: 43-037-31023
10. Field and Pool, or Exploratory Area: Patterson
11. County or Parish, State: San Juan, Utah

1. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other
2. Name of Operator: **QUESTAR EXPLORATION & PRODUCTION** N5085
3a. Address: P. O. BOX 458, ROCK SPRINGS, WY 82902
3b. Phone No. *(include area code)*: (307) 382-9791
4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*: 615' FEL, 657' FSL; SESE: 33-37S-25E

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
[X] Notice of Intent	[ ] Acidize	[ ] Deepen	[ ] Production (Start/ Resume)	[ ] Water Shut-off
	[ ] Altering Casing	[ ] Fracture Treat	[ ] Reclamation	[ ] Well Integrity
[ ] Subsequent Report	[ ] Casing Repair	[ ] New Construction	[ ] Recomplete	[X] Other Change of Operator
	[ ] Change Plans	[ ] Plug and abandon	[ ] Temporarily Abandon	
[ ] Final Abandonment Notice	[ ] Convert to Injection	[ ] Plug back	[ ] Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths or pertinent markers and sands. Attach the Bond under which the work will performed or provide the Bond No. on file with the BLM/ BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notice shall be filed only after all requirements, including reclamantion, have been completed, and the operator has determined that the site is ready for final inspection.)

Please be advised that Seeley Oil Company, LLC is considered to be the operataor of the above referenced well pursuant to that certain Assignment and Bill of Sale dated November 18, 2005. Seeley Oil Company, LLC is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. The effective date of change is January 2, 2006.

Bond #58023144

Seeley Oil Company, LLC
P.O. Box 9015
Salt Lake City, Utah 84109-0015

B.K. Seeley Jr. President

Date March 10, 2006

APPROVED 6/13/06
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

14. I hereby certify that the foregoing is true and correct.
Name *(Printed/ Typed)*: J.R. Livsey
Title: Vice President
Signature: J R Livsey
Date March 10, 2006

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by | Title | Date

Conditions of approval, if any are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. | Office

Title 18 U.S.C. Section 1001 AND Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make any department or agency of the United States any false, fictitiousor fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

RECEIVED
MAR 15 2006
DIV. OF OIL, GAS & MINING

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155

TAKE PRIDE IN AMERICA

IN REPLY REFER TO
3180
UT-922

May 5, 2006

Seeley Oil Company, LLC
P.O. Box 9015
Salt Lake City, Utah 84109

Re: Patterson Unit
San Juan County, Utah

Gentlemen:

On April 14, 2006, we received an indenture dated January 2, 2006, whereby Wexpro Company resigned as Unit Operator and Seeley Oil Company, LLC was designated as Successor Unit Operator for the Patterson Unit, San Juan County, Utah.

This indenture was executed by all required parties and the signatory parties have complied with Sections 5 and 6 of the unit agreement. The instrument is hereby approved effective May 5, 2006. In approving this designation, the Authorized Officer neither warrants nor certifies that the designated party has obtained all required approval that would entitle it to conduct operations under the Patterson Unit Agreement.

Your Utah statewide oil and gas bond No. UT0692 will be used to cover all federal operations within the Patterson Unit.

It is requested that you notify all interested parties of the change in unit operator. Copies of the approved instruments are being distributed to the appropriate federal offices, with one copy returned herewith.

Sincerely,

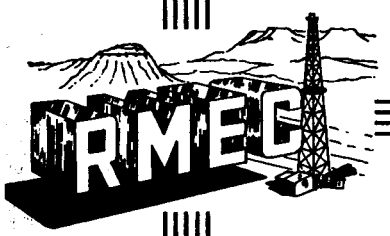
/s/ James Fouts

for Douglas Cook
Chief, Branch of Fluid Minerals

Enclosure

bcc: Field Manager - Moab (w/enclosure)
SITLA
Division of Oil, Gas & Mining
File - Patterson Unit (w/enclosure)
Agr. Sec. Chron
Reading File
Central Files
UT922:TAThompson:tt:5/5/06

WELL SITE GEOLOGY
WELL LOGGING



Final Report

CELSIUS ENERGY COMPANY

PATTERSON UNIT NO. 9

SE/SE SECTION 33, T37S-R25E

SAN JUAN COUNTY - UTAH

ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL SITE GEOLOGY — MUD LOGGING

2450 INDUSTRIAL BLVD. PHONE 243-3044 GRAND JUNCTION, COLORADO 81501

CELSIUS ENERGY COMPANY

PATTERSON UNIT NO. 9

SE/SE SECTION 33, T37S-R25E

SAN JUAN COUNTY - UTAH

GEOLOGIC REPORT

BY

JAY DEAN CARTER

ROCKY MOUNTAIN GEO-ENGINEERING COMPANY

TABLE OF CONTENTS

WELL SUMMARY

OPERATOR:	CELSIUS ENERGY COMPANY
WELL NAME:	PATTERSON UNIT NO. 9
LOCATION:	SE/SE SECTION 33, T37S, R25E
FOOTAGE:	657' FSL - 615' FEL
AREA:	LITTLE NANCY FIELD
COUNTY:	SAN JUAN
STATE:	UTAH
ELEVATION:	KB 5355' - GL GRADED 5341'
DRILLING ENGINEER:	HOWARD LEEPER
WELL SITE GEOLOGY: GEOLOGIST:	ROCKY MOUNTAIN GEO-ENGINEERING COMPANY JAY DEAN CARTER
MUD LOGGING: LOGGER:	ROCKY MOUNTAIN GEO-ENGINEERING COMPANY PAUL ZUREK
TOOL PUSHER:	TOM SCHRUM
CONTRACTOR: RIG:	ARAPAHOE DRILLING COMPANY RIG #4
SPUD DATE:	8/10/84
COMPLETION DATE:	9/3/84
HOLE SIZE:	17½" TO 45'; 12¼" TO 1620'; 8 3/4" TO T.D.
CASING RECORD:	9 5/8" SET TO 1615'
DRILL COLLARS:	6¼"
DRILL PIPE:	4½" XH
DRILLING MUD: ENGINEER:	BAROID PEN PENFIELD
ELECTRIC LOGGING: TYPE OF LOGS RUN:	SCHLUMBERGER GR-CNL-FDC, DIL-MSFL, BHC
DRILL STEM TESTS: TESTERS:	HALLIBURTON DELL GUNN, HOWARD BELL, DAN AULD
CEMENTING:	HALLIBURTON
OBJECTIVES:	DESERT CREEK Ø
TOTAL DEPTH:	5812
STATUS:	RUN PRODUCTION PIPE

CELSIUS ENERGY COMPANY
PATTERSON UNIT NO. 9
SECTION 33, T37S, R25E
SAN JUAN COUNTY - UTAH

WELL CHRONOLOGY

DATE & # DAYS	MDNT DEPTH	FTG/ DAY	DAILY OPERATIONS
8/18/84			RMEC UNIT ON LOCATION @ MDNT - RIG UP FOR LOGGING
8/19 (1)	3920	292	DRLG AHEAD - WOB 38M, RPM 70, SPM 65, PP 1200 - BIT #4 STC F-27
8/20 (2)	4212	195	DRLG AHEAD - WOB 38M, RPM 68, SPM 62, PP 1200 - SURVEY ½° @ 4265
8/21 (3)	4407	179	DRLG AHEAD - TOH @ 4407 - SURV 3/4° @ 4407 - CUT DRLG LINE - ADD JUNK BASKET - TIH - CALL IN SHOWS #1 & #2 TO P. MATHENY @ 6:30 PM & #3 @ 8 PM
8/22 (4)	4586	207	DRLG AHEAD - WOB 38, RPM 58, SPM 56, PP 1100
8/23 (5)	4793	177	DRLG AHEAD - WOB 38, RPM 58, SPM 56, PP 1100 - SURV 3/4° @ 4649 - CALL IN SHOW #4 - STRAP OUT - NO CORRECTION - TIH
8/24 (6)	4970	175	DRLG AHEAD - WOB 38M, RPM 58, SPM 54, PP 1150 - CALL IN SHOW #5 @ 5:30 PM & SHOW #6 @ 9:40 PM - DRLG AHEAD
8/25 (7)	5145	168	DRLG AHEAD - WOB 38M, RPM 58, SPM 54, PP 1150 - CALL IN SHOW #7 @ 12:15 PM - DRLG AHEAD
8/26 (8)	5313	127	DRLG AHEAD, WOB 38M, RPM 58, SPM 54, PP 1150 - CALL IN SHOW #8 TO JIM HORNBECK @ 8:50 AM - DRLG- CALL IN SHOW #9 TO HORNBECK @ 3 PM - DRL TO CORE-POINT @ 5440 - TOH - SLM FOR CORE #1 - NO CORREC-TION
8/27 (9)	5440	60	TIH & CORE #1 @ 6 AM - PULL CORE @ 4 PM - W.O. TESTER - GIH W/DST #1 TOOL - CALL IN SHOW #10-14 @ 4 PM TO GREG MARTIN
8/28 (10)	5500	4	CONT DST #1 - OPE TOOL & REVERSE OUT FLUIDS @ 11:15 AM - CIRC 4 HRS TO KILL UPHOLE SALT WATER FLOW - TOH & OPE TOOL @ 8 PM & TIH W/CORE BARREL
8/29 (11)	5504	56	CORE #2, CORING @ 18M, 60 RPM, 54 SPM, PP 1100 - LAY DN CORE @ 4 PM - GIH WITH DST #2 TOOL
8/30 (12)	5560	53	FINISH DST @ 10 AM - REVERSE OUT FLUIDS - GO TO BOT W/BIT & DRL AHEAD, 38M, RPM 60, SPM 58, PP 1000
8/31 (13)	5613	96	DRL AHEAD - WOB 38M, RPM 60, SPM 58, PP 1000 - CALL IN SHOWS #15 & 16 @ 10 AM TO MARTIN - BIT DIED @ 5708 - TOH FOR CORE #3
9/1 (14)	5709	59	CORING - WOB 20M, RPM 50, SPM 46, PP 1200 - FINISH CORING @ 3 PM - TIH W/DST TOOL FOR #3 DST

CELSIUS ENERGY COMPANY
PATTERSON UNIT NO. 9
WELL CHRONOLOGY CONTINUED

9/2/84 (15)	5768	30	TOH W/TOOL @ 8:30 AM - TRIPPING TIL HIT FLUIDS - FLUIDS BLEW OUT OF DRL STRING - RIG CLEAN UP - REVERSE OUT REMAINING FLUIDS - FINISH PULLING TEST TOOL - TIH W/BIT TO DRL TO T.D.
9/3/84 (16)	5798	14	TD @ 5812 ABOVE SALT - CIRC BOTTOMS UP - UNIT RELEASED @ 6 AM

BIT RECORD

WELL NAME: PATTERSON UNIT #9
ELEVATION: KB=5355' GRD=5341'
( ). NAME: CELSIUS ENERGY CO.
SECTION & LOCATION: SEC 33 T37S R25E
CONTRACTOR: ARAPAHOE RIG #4 RIG #
CO. & STATE: SAN JUAN, UTAH.
S UD DATE: 8/11/84
T.D. DATE:

BIT RECORD

RUN	MAKE	TYPE	IN	FTG	HOURS	FT/HR
1	HTC 17½"	OSC3	SURFACE	45	2	22.5
2	STC 12¼"	F-2	45	1575'	34.5	45.6
3	STC 8 3/4"	F-2	1620	1320'	39	33.8
4	STC	F-27	2940'	1467'	99 3/4	14.7
5	STC F-2	F-2	4407'	551'	60 3/4	9.1
6	HTC J-33		4958'	482'	69.5	6.94
7	CHRIS	C-201	5440'	60'	10 3/4	5.6
RR 7	"	"	5500'	60'	14¼	4.1
8	HTC J-33		5560'	148'	25 3/4	5.7
RR 7	CHRIS	C-201	5708'	60'	9¼	6.5
RR	HTC	J-33	5768'	44	7½	5.8

FT PER/DAY

DATE	MDNT. DEPTH	FT
8/18		
8/19	3920	292
8/20	4212'	195
8/21	4407'	179'
8/22	4586'	207'
8/23	4793'	177'
8/24	4970'	175'
8/25	5145'	168'
8/26	5313'	127'
8/27	5440'	60'
8/28	5500'	4'
8/29	5504'	56'
8/30	5560'	53'
8/31	5613'	96'
9/1	5709'	59'
9/2	5768'	37
9/3	5805	7
9/4	5812	

FT PER/DAY

DATE	MDNT. DEPTH	FT

BIT RECORD
DEVIATION SURVEY"S

WELL NAME: PATTERSON UNIT#9

COMPANY NAME: CELSIUS ENERGY COMPANY

DRILLING CONTRACTOR: ARAPAHOE RIG#4

SPUD DATE: 8/11/84

ELEVATION: KB-5355' GRD-5341'

SECTION: SEC 33 T37S R25E

LOCATION: 657' FSL, 615 FEL.

T.D. DATE: 9/3/84

BIT RECORD

							FT PER/DAY			FT PER/DAY		
RUN	MAKE	TYPE	IN	FTG	HOURS	FT/HR	DATE	MDNT DEPTH	FT	DATE	MDNT DEPTH	FT
DEV	DEPTH											
[illegible]89'	1/2°											
4265'	1/2°											
4[illegible]07'	3/4°											
4[illegible]49'	3/4°											
4958'	1°											
[illegible]40'	3/4°											

CELSIUS ENERGY COMPANY,

MUD RECORD

PATTERSON UNIT #9

DATE	DEPTH	WEIGHT	MUD GRADIENT	FUNNEL VIS	PLASTIC VIS	YIELD POINT	GEL STRENGHT	PH	FILTRATE API	CAKE	ALKALINITY FILTRATE	CHLORIDE PPM	CALCIUM PPM	SAND % CONTENT	SOLIDS % CONTENTS	OIL % CONTENT	WATER % CONTENT	% KCL
8/19	3935'	10.3		38	12	15	3/8	11/61	16.8	2/32	.4/.9	5700	TR	1/4	14	0	/ 86	
8/20	4254	10.1		38	12	14	3/7	11.53	9.6	2/32	.3/.8	4750	tr	1/4	12.8	0	/ 87.2	
8/21	4410	10.1		50	11	19	3/11	10.94	8.8	2/32	.6/1.1	3500	tr	1/4	12.5	0	/ 87.5	
8/22	4627	10.3		38	10	18	2/9	11/10	12.8	2/32	.5/.9	3200	tr	1/2	14	0	/ 86	
8/23	4808	10.3		39	9	17	2/9	11.53	12.0	2/32	.4/.7	3000	tr	1/2	14	o	/ 86	
8/24	4980	10.4		38	9	17	4/11	11/32	15.2	2/32	.6/1.1	2800	tr	1/2	17	o	/ 85.2	
8/25	5157	10.1		39	12	19	4/14	10.26	16.6	2/32	.5/1.2	2200	tr	1/2	12.7	0	/ 87.3	
8/26	5344	10.3+		42	12	21	4/11	11.38	10.4	2/32	.7/1.5	7600	42	1/2	14	0	/ 86	
8/27	5444	10.3		43	15	21	4/13	11.62	10.4	2/32	.7/1.3	6800	36	1/4	14	0	/ 86	
8/28	5500	10.2		48	15	27	5/17	12.26	9.6	2/32	.9/2.0	5500	56	1/2	13.3	0	/ 86.7	
8/29	5530	10.3		41	14	17	4/12	11.39	12.8	2/32	1/1.9	10100	86	1/2	13.6	0	/ 86.4	
8/30	5558	10.2		50	15	17	5/12	11.52	9.6	2/32	-	8650	42	1/4	13	0	/ 87	
8/31	5648	10.9		43	15	19	4/14	11.16	9.6	2/32	-	11800	64	1/2	17.8	0	/ 82.2	
9/1	5768	12.5		39	16	16	14/36	11.5	13.6	2/32	.8/1.3	8000	60	3/4	32.2	0	/ 67.8	
9/2	5768	12.5		42				12.0	12.0	2/32		8000	20	3/4				

DRILL STEM TEST

WELL: PATTERSON UNIT #9 DATE: 8/28/84

TEST: DST #1 FORMATION: ISMAY WITNESS: LEEPER, CARTER

REASON: SHOW #12, #13 & #14 CORE #1

INTERVAL: 5430' - 5500' T.D. 5500

TESTING CO.: HALLIBURTON

TYPE TEST: CONVENTIONAL DOUBLE PACKER OPEN HOLE

CUSHION: NONE

I. FLOW: OPE TOOL W/WK BLO, 4" IN BUCKET, V STRONG BLO IN 14 MIN (#20)
SWITCH TO ¼" CHOKE, BUILD TO *&# IN 31 M (36 mcf), CLOSE TOOL

F. FLOW: OPE TOOL @ 16#, BLD TO 180# (68 mcf), SWITCH TO ¼" CHOKE, 185# (290 mcf),
STAB GAUGE @ 114# (190 mcf) @ 138 M, LET GO TO 180 M 112# (188 mcf)

GAUGES

I. FLOW OPEN 31 MIN.

GTS 25 m, 1/8" CHOKE

27 Mcf 25 min.

36 Mcf 31 min.

____ Mcf ____ min.

____ Mcf ____ min.

F. FLOW OPEN 180 MIN.

GTS WHEN TOOL OPENED				¼" 230	Mcf	68	min.
1/8" 40	Mcf	6	min.	¼" 195	Mcf	108	min.
1/8" 59	Mcf	23	min.	¼" 190	Mcf	138	min.
1/8" 68	Mcf	38	min.	¼" 188	Mcf	180	min.
1/4" 290	Mcf	41	min.	____	Mcf	____	min.

RECOVERY: 1200 oil & gas cut mud

SAMPLE CHAMBER: .45 cfg and 600 cc oil @ 90 psi

	TOP CHART	TIME	BOTTOM CHART
IH:	2875		2905
IF:	100-100	31	134-161
ISI:	2438	121	2451
FF:	213-280	180	214-294
FSI:	2424	270	2411
FH:	2783		2825

BHT 128 °F

SAMPLES CAUGHT: Gas (X) Oil (X) Water (__) Mud (X)

WHERE CAUGHT: Drill pipe (__) Reversed Out Flow Line (X) Separator (__) MFE Tool (X)

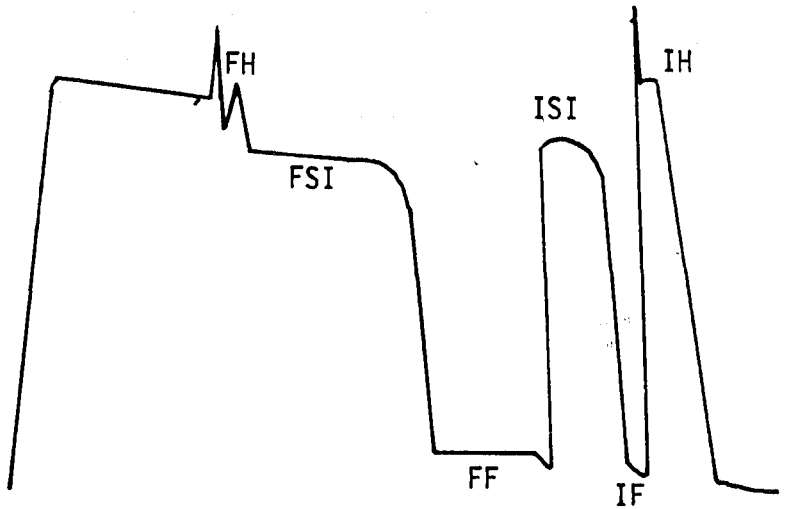
RESISTIVITIES @ 68°

REMARKS: 48 GRAVITY OIL @ 60° F

PIT MUD: .85. FILTRATE: NONE. GAS/OIL RATION = 132/1

REC. MUD: 1.10. REC. WTR: ____.

CHART PICTURE ON BACK


FH
FSI
FF
ISI
IF
IH

DRILL STEM TEST

WELL: PATTERSON UNIT #9 DATE: 8/30/84

TEST: #2 FORMATION: ISMAY WITNESS: LEEPER, CARTER

REASON: EVALUATE ISMAY

INTERVAL: 5500-5558' T.D. 5558'

TESTING CO.: HALLIBURTON, TESTER HOWARD BELL

TYPE TEST: CONVENTIONAL DOUBLE PACKER OPEN HOLE

CUSHION: NONE

I. FLOW: OPE TOOL W/WEAK BLO, 2" IN BUCKET, 15 M GOOD BLO (3#)
CLOSE TOOL W/GOOD BLOW (9.5#) NGTS

F. FLOW: OPE TOOL W/GD BLO (2#), 5 M GTS, SWITCH TO 1/8" CHOKE, 12# (9 mcf) IN 15 M
17# (11 mcf), 105 M 15# (10 mcf), gauge stab @ 9# (8 mcf) IN 165 M,
CLOSE TOOL @ 8# (7.5 mcf) @ 210 M

GAUGES

I. FLOW OPEN 30 MIN.		F. FLOW OPEN 210 MIN.		
GTS NONE		GTS 5 MIN	7.5 Mcf 210 min.	
3# Mcf 15 min.		9 Mcf 5 min.	Mcf min.	
9.5# Mcf 30 min.		11 Mcf 15 min.	Mcf min.	
Mcf min.		9 Mcf 45 min.	Mcf min.	
Mcf min.		8 Mcf 165 min.	Mcf min.	

RECOVERY: 700' OIL & GAS CUT MUD, 100' WTR (FILTRATE)

SAMPLE CHAMBER: 0.14 cfg and 200 cc's OIL & 1800 cc WATER @ 200 psi

	TOP CHART	TIME	BOTTOM CHART
IH:	3026		2996
IF:	65-174	30	86-171
ISI:	1864	120	1873
FF:	131-305	210	128-373
FSI:	1821	300	1873
FH:	2982		2975

BHT 128 °F

SAMPLES CAUGHT: Gas (_) Oil (_) Water (_) Mud (_)

WHERE CAUGHT: Drill pipe (_) Flow Line (_) Separator (_) MFE Tool (_)

RESISTIVITIES @ 68°

REMARKS:

PIT MUD: _____. FILTRATE: _____.

REC. MUD: _____. REC. WTR: _____.

CHART PICTURE ON BACK

BLACK CHART NOT TRACEABLE

DRILL STEM TEST

WELL: PATTERSON #9 DATE: 9/2/84

TEST: 3 FORMATION: DESERT CREEK WITNESS: LEEPER, MATHENY, CARTER

REASON: SHOW #17 DESERT CRK Ø CORE #3

INTERVAL: 5728 - 5768 (40') T.D. 5768'

TESTING CO.: HALLIBURTON, TESTER DAN AULD

TYPE TEST: CONVENTIONAL DOUBLE PACKER OPEN HOLE

CUSHION: NONE

I. FLOW: OPE W/G BLO TO BOB, 32 OZ IN 1 MIN, 9 PSI IN 2 M, 26.5 psi IN 5 M, 54 psi IN 10 M, GTS IN 15 M ON ¼" CHOKE

F. FLOW: OPE W/GD BLOW BOB, GTS IMMEDIATELY

GAUGES

I. FLOW OPEN 30 MIN.				F. FLOW OPEN 120 MIN. ¼" CHOKE					
GTS 15 MIN				GTS IMMED				137 Mcf	60 min.
128 Mcf	15 min.	¼" CHOKE		79 Mcf	8 min.			128 Mcf	75 min.
151 Mcf	20 min.			114 Mcf	15 min.			119 Mcf	90 min.
175 Mcf	25 min.			138 Mcf	30 min.			111 Mcf	105 min.
184 Mcf	30 min.			141 Mcf	45 min.			106 Mcf	120 min.

RECOVERY: 1588' GAS CUT OIL, (22 BBL), 1000' SALT WATER (10 BBL) REVERSED

SAMPLE CHAMBER: 1.08 cfg and 900 cc OIL, 200 cc H_2O (SALT) @ 355 psi

	TOP CHART 5712'	TIME	BOTTOM CHART 5765'
IH:	3891		3884
IF:	147-440	30	190-444
ISI:	31.33	120	3144
FF:	356-985	120	360-994
FSI:	3133	367	3144
FH:	3764		3757

BHT 133 °F

SAMPLES CAUGHT: Gas (X) Oil (X) Water (X) Mud (X)

WHERE CAUGHT: Drill pipe (X) Flow Line (X) Separator ( ) MFE Tool (X)

RESISTIVITIES @ 68°

PIT MUD: .368 @84° FILTRATE: _____.

9,000 ppm

REC. MUD: NONE. REC. WTR: .07 @ 81°F 60,000 ppm

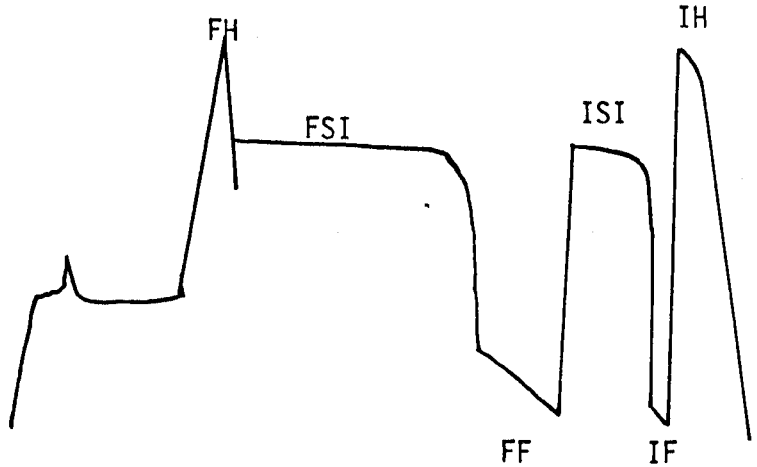
REMARKS: GAS SPL RUN ON CHROMATOGRAPH

C_1 = 22,200, C_2 = 8640, C_3-4860, C_4 = 2960

OIL 46.5° @ 82F, 44.3° @ 60° F. 0 NITRATES IN REC WTR, 200 PPM IN MUD FILTRATE

CHART PICTURE ON BACK

Chart: BOTTOM



SHOW REPORT

WELL PATTERSON UNIT #9 AREA PARADOX BASIN CO. SAN JUAN STATE UTAH

SHOW NO. #1 from 4504' to 4506' P.T.D. 4516'

DRILLING BREAK - from 4504' to 4506'. GROSS 2' ft, NET 2' ft

LITHOLOGY: Type - SS LS DOLO SH SLTSTN OTHER
% (X) ( ) ( ) ( ) ( )
Remarks frst,wh,vfgr-mgr, msrt, wcmt, vcalc, fri.

POROSITY: (Matrix) Est. % 5-10%
(Fracture) Evidence for fracturing NONE

STAIN: Even, Patchy, Pin Point, NONE (Other)
Light, Dark, "Live", "Dead"
% in total cuttings ;% in prob. reservoir lithology
Stain on fracture faces

FLUORESCENCE: Color NONE ; % in total ctgs

CUT (Chlorothene): NONE

PERIOD	DT	MUD GAS UNITS	CUTTINGS GAS UNITS	GAS CHROMATOGRAPH C_1	C_2	C_3	C_4	C_5	C_6	CO_2	Etc.
Before	5.5	25		200	50	TR	100	150			
During	7.0	55		5100	200	TR					
After	9.0	25		200	50	TR	100	150			

RECOGNIZED BY: JAY CARTER Time 5:30 A.M. X P.M. Date 8/21/84

CALLED PAUL MATHENY Time 6:30 A.M. X P.M. Date 8/21/84

REMARKS:

SHOW REPORT

WELL PATTERSON UNIT #9 AREA PARADOX BASIN CO. SAN JUAN STATE UTAH.

SHOW NO. #2 from 4513' to 4515' P.T.D. 4520'

DRILLING BREAK - from 4513' to 4515'. GROSS 2' ft, NET 2' ft

LITHOLOGY: Type - SS LS DOLO SH SLTSTN OTHER
% (X) ( ) ( ) ( ) ( )
Remarks frst-wh, vfgr, wcmt, v calc, fri.

POROSITY: (Matrix) Est. % 5%
(Fracture) Evidence for fracturing NONE

STAIN: Even, Patchy, Pin Point, NONE (Other)
Light, Dark, "Live", "Dead"
% in total cuttings ; % in prob. reservoir lithology
Stain on fracture faces

FLUORESCENCE: Color NONE ; % in total ctgs

CUT (Chlorothene): NONE

PERIOD	DT	MUD GAS	CUTTINGS GAS	GAS CHROMATOGRAPH							
		UNITS	UNITS	C_1	C_2	C_3	C_4	C_5	C_6	CO_2	Etc.
Before	8.5	25		200	50	TR	100	150			
During	8.5	45		4000	150	TR	-	-			
After	8.5	25		400	50	TR	100	150			

RECOGNIZED BY: JAY CARTER Time 6:15 A.M. X P.M. Date 8/21/84

CALLED PAUL MATHENY Time 6:30 A.M. X P.M. Date 8/21/84

REMARKS:

SHOW REPORT

WELL PATTERSON UNIT #9 AREA PARADOX BASIN CO. SAN JUAN STATE UTAH

SHOW NO. #3 from 4520' to 4522' P.T.D. 4532

DRILLING BREAK - from 4520' to 4522'. GROSS 2' ft, NET 2' ft.

LITHOLOGY: Type - SS LS DOLO SH SLTSTN OTHER
% (X) ( ) ( ) ( ) ( )
Remarks frst-wh, lt gy,vfr-fgr, msrt, wcmt, mica, calc, fri-sl frm.

POROSITY: (Matrix) Est. % 5-10
(Fracture) Evidence for fracturing NONE

STAIN: Even, Patchy, Pin Point, NONE (Other)
Light, Dark, "Live", "Dead"
% in total cuttings ; % in prob. reservoir lithology
Stain on fracture faces

FLUORESCENCE: Color NONE ; % in total ctgs

CUT (Chlorothene): NONE

PERIOD	DT	MUD GAS UNITS	CUTTINGS GAS UNITS	GAS CHROMATOGRAPH C_1	C_2	C_3	C_4	C_5	C_6	CO_2	Etc.
Before	8	20		200	50	TR	100	100			
During	7.5	35		2500	100	TR	TR	TR			
After	8.5	20		200	50	TR	100	100			

RECOGNIZED BY: JAY CARTER Time 8:00 A.M. X P.M. Date 8/21/84

CALLED PAUL MATHENY Time 8:00 A.M. X P.M. Date *?@!?*$

REMARKS:

SHOW REPORT

WELL PATTERSON UNIT #9 AREA PARADOX BASIN CO. SAN JUAN STATE UTAH.

SHOW NO. #4 from 4776' to 4790' P.T.D. 4794'

DRILLING BREAK - from 4776' to 4790'. GROSS 14' ft, NET 14' ft.

LITHOLOGY: Type - SS LS DOLO SH SLTSTN OTHER
% ( ) (X) ( ) ( ) ( )
Remarks wh-lt gy sndy, shly.

POROSITY: (Matrix) Est. % NONE
(Fracture) Evidence for fracturing NONE

STAIN: Even, Patchy, Pin Point, NONE (Other)
Light, Dark, "Live", "Dead"
% in total cuttings ; % in prob. reservoir lithology
Stain on fracture faces

FLUORESCENCE: Color NONE ; % in total ctgs

CUT (Chlorothene): NONE

PERIOD	DT	MUD GAS	CUTTINGS GAS	GAS CHROMATOGRAPH							
		UNITS	UNITS	C_1	C_2	C_3	C_4	C_5	C_6	CO_2	Etc.
Before	9	8		100	TR	-	-				
During	8	28		225	100	50	110	=			
After	9	20		175	755	25	-	-			

RECOGNIZED BY: PAUL ZUREK Time 12:00 X A.M. P.M. Date 8/23/84

CALLED PAUL MATHENY Time 12:30 X A.M. P.M. Date 8/23/84

REMARKS:

SHOW REPORT

WELL PATTERSON UNIT #9 AREA PARADOX BASIN CO. SAN JUAN STATE UTAH.

SHOW NO. #5 from 5080' to 5082' P.T.D. 5092'

DRILLING BREAK - from 5080' to 5082'. GROSS 2' ft, NET 2' ft.

LITHOLOGY: Type - SS LS DOLO SH SLTSTN OTHER
% ( ) (X) ( ) ( ) ( )
Remarks cherty, occ ool, lt gy-lt gybrn.

POROSITY: (Matrix) Est. % NONE
(Fracture) Evidence for fracturing NONE

STAIN: Even, Patchy, Pin Point, NONE (Other)
Light, Dark, "Live", "Dead"
% in total cuttings ; % in prob. reservoir lithology
Stain on fracture faces

FLUORESCENCE: Color NONE ; % in total ctgs

CUT (Chlorothene): NONE

PERIOD	DT	MUD GAS	CUTTINGS GAS	GAS CHROMATOGRAPH							
		UNITS	UNITS	C_1	C_2	C_3	C_4	C_5	C_6	CO_2	Etc.
Before	8	5		300	50	TR					
During	8	20		INERT PROBABLE N_2							
After	11	5		300	50	TR					

RECOGNIZED BY: JAY CARTER Time 4:30 X A.M. P.M. Date 8/24/84

CALLED PAUL MATHENY Time 5:30 X A.M. P.M. Date 8/24/84

REMARKS: REVERSAL ON CHROMATOGRAPH INDICATES GAS WITH INERT ORIGIN.

SHOW REPORT

WELL PATTERSON UNIT# 9 AREA PARADOX BASIN CO. SAN JUAN STATE UTAH

SHOW NO. #6 from 5114' to 5116' P.T.D. 5120'

DRILLING BREAK - from 5114' to 5116'. GROSS 2' ft, NET 2' ft.

LITHOLOGY: Type - SS LS DOLO SH SLTSTN OTHER
% ( ) ( ) ( ) (X) ( )
Remarks blk, vcarb-coaly, ncalc, fiss, brit.

POROSITY: (Matrix) Est. % NONE
(Fracture) Evidence for fracturing NONE

STAIN: Even, Patchy, Pin Point, NONE (Other)
Light, Dark, "Live", "Dead"
% in total cuttings ; % in prob. reservoir lithology
Stain on fracture faces

FLUORESCENCE: Color NONE ; % in total ctgs

CUT (Chlorothene): NONE

PERIOD	DT	MUD GAS UNITS	CUTTINGS GAS UNITS	GAS CHROMATOGRAPH C_1	C_2	C_3	C_4	C_5	C_6	CO_2	Etc.
Before	10	10		750	300	200	50	-			
During	8	110		13410	3900	1050	480	-			
After	10	15		800	350	210	100	-			

RECOGNIZED BY: PAUL ZUREK Time 9:15 A.M. X P.M. Date 8/5/84

CALLED PAUL ZUREK Time 9:40 A.M. X P.M. Date 8/24/84

REMARKS:

SHOW REPORT

WELL PATTERSON UNIT #9 AREA PARADOX BASIN CO. SAN JUAN STATE UTAH.

SHOW NO. #7 from 5221' to 5231' P.T.D. 5237'

DRILLING BREAK - from 5221' to 5231'. GROSS 10 ft, NET 6 ft.

LITHOLOGY: Type - SS LS DOLO SH SLTSTN OTHER
% ( ) (X) ( ) ( ) ( )
Remarks thin blk coaly strk,in fxln foss fairly clean ls

POROSITY: (Matrix) Est. % TR-5
(Fracture) Evidence for fracturing NONE

STAIN: Even, Patchy, Pin Point, NONE (Other)
Light, Dark, "Live", "Dead"
% in total cuttings ; % in prob. reservoir lithology
Stain on fracture faces

FLUORESCENCE: Color NONE ; % in total ctgs

CUT (Chlorothene): NONE

PERIOD	DT	MUD GAS	CUTTINGS GAS	GAS CHROMATOGRAPH							
		UNITS	UNITS	C_1	C_2	C_3	C_4	C_5	C_6	CO_2	Etc.
Before	8	10		700	280	150	50	-			
During	6	50		6300	1320	540	185	TR			
After	7.5	10		700	300	140	50	-			

RECOGNIZED BY: JAY CARTER Time 11:20 X A.M. P.M. Date 8/25/84

CALLED PAUL MATHENY Time 12:15 X A.M. P.M. Date 8/25/84

REMARKS:

SHOW REPORT

WELL PATTERSON UNIT #9 AREA PARADOX BASIN CO. SAN JUAN STATE UTAH.

SHOW NO. 8 from 5353' to 5355' P.T.D. 5363'

DRILLING BREAK - from 5353' to 5355'. GROSS 2' ft, NET 2' ft.

LITHOLOGY: Type - SS LS DOLO SH SLTSTN OTHER
% ( ) (X) ( ) ( ) ( )
Remarks fxln-micxln, occ hairline frac, occ interxln ø, frm.

POROSITY: (Matrix) Est. % 5-10%
(Fracture) Evidence for fracturing occ hairline frac's with blk dead oil.

STAIN: Even, Patchy, X Pin Point, _____ (Other)
Light, XDark, X "Live", X "Dead"
% in total cuttings 5%; % in prob. reservoir lithology 10%
Stain on fracture faces blk-v dk brnon sm chert faces.

FLUORESCENCE: Color yel-gn; % in total ctgs tr-5%

CUT (Chlorothene): sl yel-gn strmg cut.

PERIOD	DT	MUD GAS UNITS	CUTTINGS GAS UNITS	GAS CHROMATOGRAPH C_1	C_2	C_3	C_4	C_5	C_6	CO_2	Etc.
Before	11	6		264	144	54	37				
During	9	75		5550	2016	1080	370	TR			
After	11	10		518	192	81	74	-			

RECOGNIZED BY: PAUL ZUREK Time 8:00 X A.M. P.M. Date 8/26/84

CALLED JIM HORNBECK Time 8:50 X A.M. P.M. Date 8/26/84

REMARKS:

SHOW REPORT

WELL PATTERSON UNIT #9 AREA PARADOX BASIN CO. SAN JUAN STATE UTAH.

SHOW NO. #9 from 5390' to 5392' P.T.D. 5395'

DRILLING BREAK - from 5390' to 5392'. GROSS 2' ft, NET 2' ft.

LITHOLOGY: Type - SS LS DOLO SH SLTSTN OTHER
% ( ) ( ) ( ) (X) ( )
Remarks lmy-dolo, fxln, dns, v dk gybrn,

POROSITY: (Matrix) Est. % none
(Fracture) Evidence for fracturing none

STAIN: Even, Patchy, Pin Point, none (Other)
Light, Dark, "Live", "Dead"
% in total cuttings ; % in prob. reservoir lithology
Stain on fracture faces

FLUORESCENCE: Color none ; % in total ctgs

CUT (Chlorothene): none

PERIOD	DT	MUD GAS	CUTTINGS GAS	GAS CHROMATOGRAPH							
		UNITS	UNITS	C_1	C_2	C_3	C_4	C_5	C_6	CO_2	Etc.
Before	11	12		750	200	100	50				
During	10	150		4000	4000	1700	700	TR			
After	11.5	20		1110	480	243	110	-			

RECOGNIZED BY: JAY CARTER Time 2:30 X A.M. P.M. Date 8/26/84

CALLED JIM HORNBECK Time 3:00 X A.M. P.M. Date 8/26/84

REMARKS:

SHOW REPORT

WELL PATTERSON UNIT #9 AREA PARADOX BASIN CO. SAN JUAN STATE UTAH.

SHOW NO. 10 from 5434' to 5438' P.T.D. 5500'

DRILLING BREAK - from 5434' to 5438'. GROSS 4' ft, NET 4' ft.

LITHOLOGY: Type - SS LS DOLO SH SLTSTN OTHER
% ( ) ( ) ( ) (X) ( )
Remarks m gy, slty, dolo-sl calc, frm.

POROSITY: (Matrix) Est. % none
(Fracture) Evidence for fracturing none

STAIN: Even, Patchy, Pin Point, none (Other)
Light, Dark, "Live", "Dead"
% in total cuttings ; % in prob. reservoir lithology
Stain on fracture faces

FLUORESCENCE: Color none ; % in total ctgs

CUT (Chlorothene): none

PERIOD	DT	MUD GAS	CUTTINGS GAS	GAS CHROMATOGRAPH							
		UNITS	UNITS	C_1	C_2	C_3	C_4	C_5	C_6	CO_2	Etc.
Before	10	30		2000	700	400	TR				
During	8	55		3500	1400	700	250	-			
After	8.5	30		1980	700	380	TR				

RECOGNIZED BY: JAY CARTER Time 10:30 A.M. X P.M. Date 8/26/84

CALLED GREG MARTIN Time 4:00 A.M. X P.M. Date 8/27/84

REMARKS:

SHOW REPORT

WELL PATTERSON UNIT #9 AREA PARADOX CO. SAN JUAN STATE UTAH.

SHOW NO. 11 from 5444' to 5448' P.T.D. 5500'

DRILLING BREAK - from 5444' to 5448'. GROSS 4' ft, NET 4' ft.

LITHOLOGY: Type - SS LS DOLO SH SLTSTN OTHER
% ( ) ( ) ( ) (X) ( )
Remarks m gy-dk gybrn, fxln, dolo, dns, brit.

POROSITY: (Matrix) Est. % none
(Fracture) Evidence for fracturing none

STAIN: Even, Patchy, Pin Point, none (Other)
Light, Dark, "Live", "Dead"
% in total cuttings ; % in prob. reservoir lithology
Stain on fracture faces

FLUORESCENCE: Color none ; % in total ctgs

CUT (Chlorothene): none

PERIOD	DT	MUD GAS	CUTTINGS GAS	GAS CHROMATOGRAPH							
		UNITS	UNITS	C_1	C_2	C_3	C_4	C_5	C_6	CO_2	Etc.
Before	16.5	30		2000	800	400	50	-			
During	11	80		5500	1400	900	400	-			
After	13	15		1000	400	200	-				

RECOGNIZED BY: JAY CARTER Time 9:30 X A.M. P.M. Date 8/27/84

CALLED GREG MARTIN Time 4:00 A.M. P.M. X Date 8/27/84

REMARKS:

SHOW REPORT

WELL PATTERSON UNIT #9 AREA PARADOX BASIN CO. SAN JUAN STATE UTAH

SHOW NO. 12 from 5451' to 5459' P.T.D. 5500'

DRILLING BREAK - from 5451' to 5459'. GROSS 8' ft, NET 8' ft.

LITHOLOGY: Type - SS LS DOLO SH SLTSTN OTHER
% ( ) (X) ( ) ( ) ( )
Remarks wh-crm, foss-cxln, vis calcite xl's.

POROSITY: (Matrix) Est. % 10%
(Fracture) Evidence for fracturing none

STAIN: Even, Patchy, X Pin Point, _____(Other)
Light, Dark, X "Live", "Dead"
% in total cuttings CORE#1 ;% in prob. reservoir lithology
Stain on fracture faces

FLUORESCENCE: Color yel-gn ; % in total ctgs 20%

CUT (Chlorothene): sl yel-gn halo.

PERIOD	DT	MUD GAS	CUTTINGS GAS	GAS CHROMATOGRAPH							
		UNITS	UNITS	C_1	C_2	C_3	C_4	C_5	C_6	CO_2	Etc.
Before	9	15		1000	400	200	tr				
During	3	175		15000	3000	1400	600	100			
After	9	20		1300	450	250	tr	-			

RECOGNIZED BY: JAY CARTER Time 12:30 X A.M. P.M. Date 8/27/84

CALLED GREG MARTIN Time 4:00 X A.M. P.M. Date 8/27/84

REMARKS:

SHOW REPORT

WELL PATTERSON UNIT #9 AREA PARADOX BASIN CO. SAN JUAN STATE UTAH.

SHOW NO. 13 from 5475' to 5480' P.T.D. 5500'

DRILLING BREAK - from 5475' to 5480'. GROSS 5' ft, NET 5' ft.

LITHOLOGY: Type - SS LS DOLO SH SLTSTN OTHER
% ( ) ( ) (X) ( ) ( )
Remarks tan fxln, pnpt vugs.

POROSITY: (Matrix) Est. % 10-15%
(Fracture) Evidence for fracturing yel-gn flor on broken rock edge.

STAIN: Even, X Patchy, Pin Point, (Other)
Light, Dark, X"Live", "Dead"
% in total cuttings CORE #1 ;% in prob. reservoir lithology 15%
Stain on fracture faces

FLUORESCENCE: Color yel-gn ; % in total ctgs 30%

CUT (Chlorothene): sl yel-gn cut.

PERIOD	DT	MUD GAS	CUTTINGS GAS	GAS CHROMATOGRAPH							
		UNITS	UNITS	C_1	C_2	C_3	C_4	C_5	C_6	CO_2	Etc.
Before	12	20		1500	450	200	-				
During	7.5	70		5000	1800	800	300	-TR			
After	13	40		2200	775	380	180	-			

RECOGNIZED BY: JAY CARTER Time 2:00 A.M. X P.M. Date 8/27/84

CALLED GREG MARTIN Time 4:00 A.M. X P.M. Date 8/27/84

REMARKS:

SHOW REPORT

WELL PATTERSON UNIT #9 AREA PARADOX BASIN CO. SAN JUAN STATE UTAH

SHOW NO. 14 from 5486' to 5491' P.T.D. 5500

DRILLING BREAK - from 5486' to 5491'. GROSS 5' ft, NET 5' ft.

LITHOLOGY: Type - SS LS DOLO SH SLTSTN OTHER
% ( ) ( ) (X) ( ) ( )
Remarks tan, fxln,pnpt vugs.

POROSITY: (Matrix) Est. % 10%
(Fracture) Evidence for fracturing

STAIN: Even, XPatchy, X Pin Point, (Other)
Light, Dark, X"Live", "Dead"
% in total cuttings 15 ;% in prob. reservoir lithology 15
Stain on fracture faces

FLUORESCENCE: Color yel-gn ; % in total ctgs 30

CUT (Chlorothene): immed yel-gn flash & strmg cut. vis blk oil in vugs.

PERIOD	DT	MUD GAS	CUTTINGS GAS	GAS CHROMATOGRAPH							
		UNITS	UNITS	C_1	C_2	C_3	C_4	C_5	C_6	CO_2	Etc.
Before	11	20		1000	400	200	tr	-			
During	6	110		8100	2600	1400	500	tr			
After	8.5	40		2400	960	480	180	-			

RECOGNIZED BY: JAY CARTER Time 3:45 A.M. X P.M. Date 8/27/84

CALLED GREG MARTIN Time 4:00 A.M. X P.M. Date 8/27/84

REMARKS:

SHOW REPORT

WELL PATTERSON UNIT #9 AREA PARADOX BASIN CO. SAN JUAN STATE UTAH

SHOW NO. 15 from 5650' to 5659' P.T.D. 5670'

DRILLING BREAK - from 5650' to 5659'. GROSS 9' ft, NET 9' ft.

LITHOLOGY: Type - SS LS DOLO SH SLTSTN OTHER
% ( ) ( ) ( ) (X) ( )
Remarks m gy-dk gy, carb.

POROSITY: (Matrix) Est. % none
(Fracture) Evidence for fracturing none

STAIN: Even, Patchy, Pin Point, none (Other)
Light, Dark, "Live", "Dead"
% in total cuttings ; % in prob. reservoir lithology
Stain on fracture faces

FLUORESCENCE: Color none ; % in total ctgs

CUT (Chlorothene): none

PERIOD	DT	MUD GAS	CUTTINGS GAS	GAS CHROMATOGRAPH							
		UNITS	UNITS	C_1	C_2	C_3	C_4	C_5	C_6	CO_2	Etc.
Before	12.5	10		250	300	100	111	-			
During	7	44		1184	648	324	148	-			
After	9	25		593	340	216	111	-			

RECOGNIZED BY: PAUL ZUREK Time 7:45 X A.M. X P.M. Date 8/31/84

CALLED GREG MARTIN Time 10:00 X A.M. P.M. Date 8/31/84

REMARKS:

SHOW REPORT

WELL PATTERSON UNIT #9 AREA PARADOX BASIN CO. SAN JUAN STATE UTAH

SHOW NO. 16 from 5664' to 5666' P.T.D. 5675' 2'

DRILLING BREAK - from 5664' to 5666'. GROSS 2' ft, NET 2' ft.

LITHOLOGY: Type - SS LS DOLO SH SLTSTN OTHER
% ( ) ( ) (X) ( ) ( )
Remarks sndy, cxln, grd's to ls.

POROSITY: (Matrix) Est. % 10%
(Fracture) Evidence for fracturing none

STAIN: Even, Patchy, Pin Point, none (Other)
Light, Dark, "Live", "Dead"
% in total cuttings ; % in prob. reservoir lithology
Stain on fracture faces

FLUORESCENCE: Color none ; % in total ctgs

CUT (Chlorothene): none

PERIOD	DT	MUD GAS	CUTTINGS GAS	GAS CHROMATOGRAPH							
		UNITS	UNITS	C_1	C_2	C_3	C_4	C_5	C_6	CO_2	Etc.
Before	11	25		590	330	190	100	-			
During	6	150		4884	2065	1080	370	-			
After	9	25		595	340	200	90	-			

RECOGNIZED BY: JAY CARTER Time 9:20 XA.M. P.M. Date 8/31/84

CALLED GREG MARTIN Time 10:00 X A.M. P.M. Date 8/31/84

REMARKS:

SHOW REPORT

WELL PATTERSON UNIT #9 AREA PARADOX BASIN CO. SAN JUAN STATE UTAH.

SHOW NO. 17 from 5734' to 5756' P.T.D. 5768'

DRILLING BREAK - from 5734' to 5756'. GROSS 22' ft, NET 22' ft.

LITHOLOGY: Type - SS LS DOLO SH SLTSTN OTHER
% ( ) ( ) (X) ( ) ( )
Remarks brn, vfxln, dk patchy stn, occ pnpt ø.

POROSITY: (Matrix) Est. % 15
(Fracture) Evidence for fracturing none

STAIN: Even, X Patchy, X Pin Point, _____ (Other)
Light, X Dark, X "Live", "Dead"
% in total cuttings 50 ;% in prob. reservoir lithology 50
Stain on fracture faces

FLUORESCENCE: Color brt yel-gold ; % in total ctgs overall

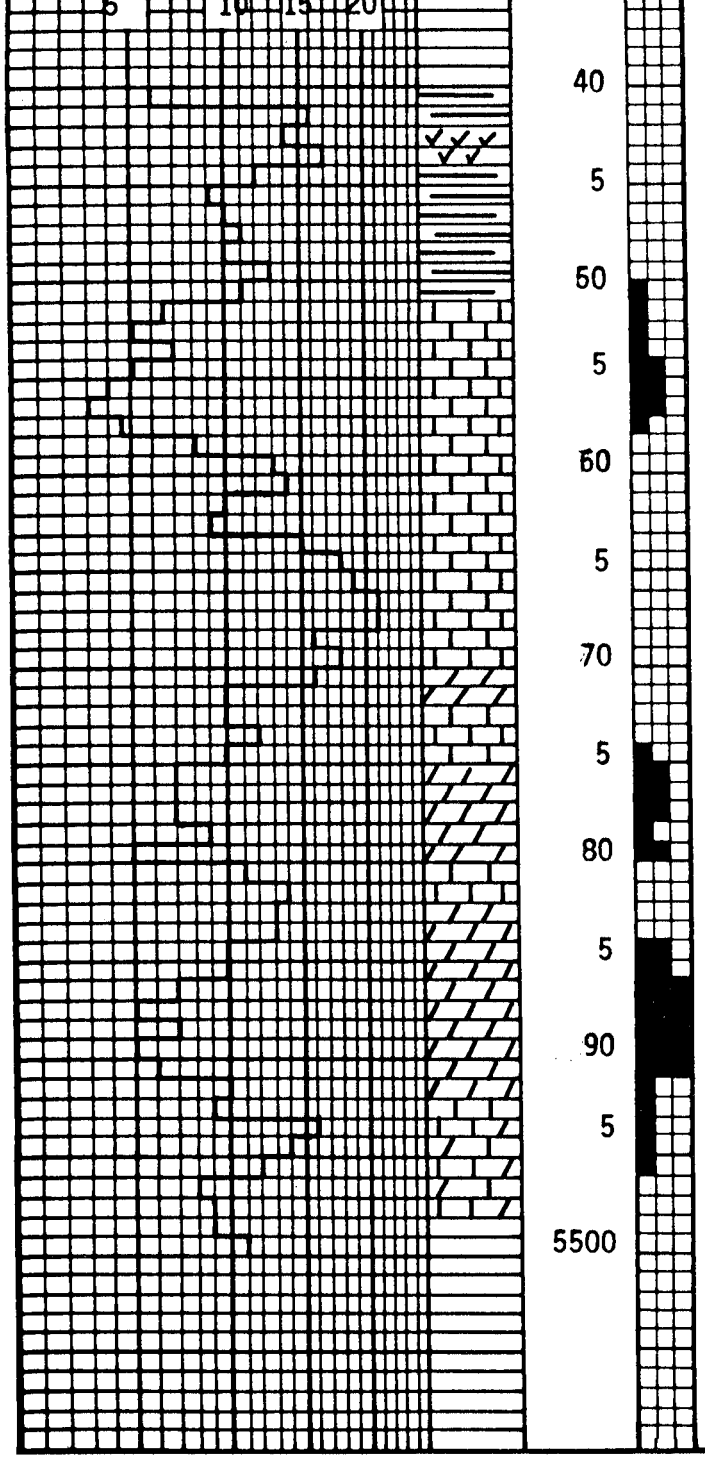
CUT (Chlorothene): fast yel-gn strmg cut.

PERIOD	DT	MUD GAS	CUTTINGS GAS	GAS CHROMATOGRAPH							
		UNITS	UNITS	C_1	C_2	C_3	C_4	C_5	C_6	CO_2	Etc.
Before	17	10		250	100	50	-				
During	8.5	60		1200	850	500	220	tr			
After	14	25		500	300	150	50	-			

RECOGNIZED BY: JAY CARTER Time 2:00 X A.M. P.M. Date 9/1/84

CALLED PAUL MATHENY (ON LOCATION) Time 4:00 X A.M. P.M. Date 9/1/84

REMARKS:



40
5
50
5
60
5
70
5
80
5
90
5
5500

SH- dk gy, fxln, dolo, brit.

ANHY- wh-opac, vfxln, suc ip, frm.

SH- m gy-dk gybrn, vfxln, dolo, pyr ip, brit.

LS- wh-crm, cxln - FOSS, vis calc crystals, pnpt blk oil stn, f-g interxln ø, pnpt vugs, spty yel-gn flor, sl yel-gn halo.

LS- lt gybrn, micxln, plty, dns, NSOFC.

LS- lt gybrn, vf-micxln, no vis ø, hairline calcite filled fracture's.

DOLO- tan-lt brn, fxln, tr pnpt vugs, no vis interxln ø, NSOFC.

LS- grgd from dolo aa, v lt brn- v lt gybrn.

DOLO- tan-v lt brn, vfxln, vf interxln ø, patchy yel-gn flor, yel-gn milky cut.

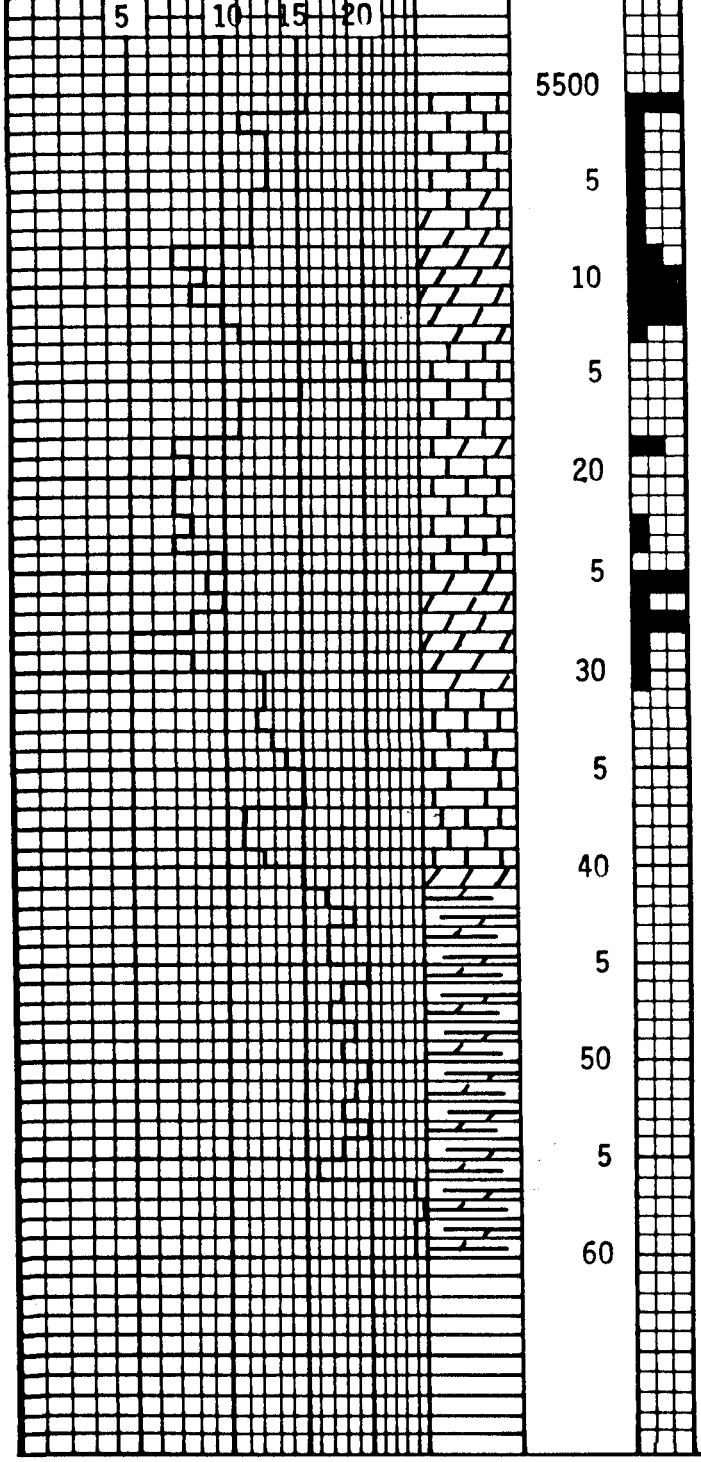
LS- m-dk gy, v dns, tr calc, tr crinoids, brit-hd, NSOFC.

DOLO- tan-buff, vf-fxln, occ pnpt vugs, fair interxln ø, good yel-gn flor, immed yel-gn strmg cut.

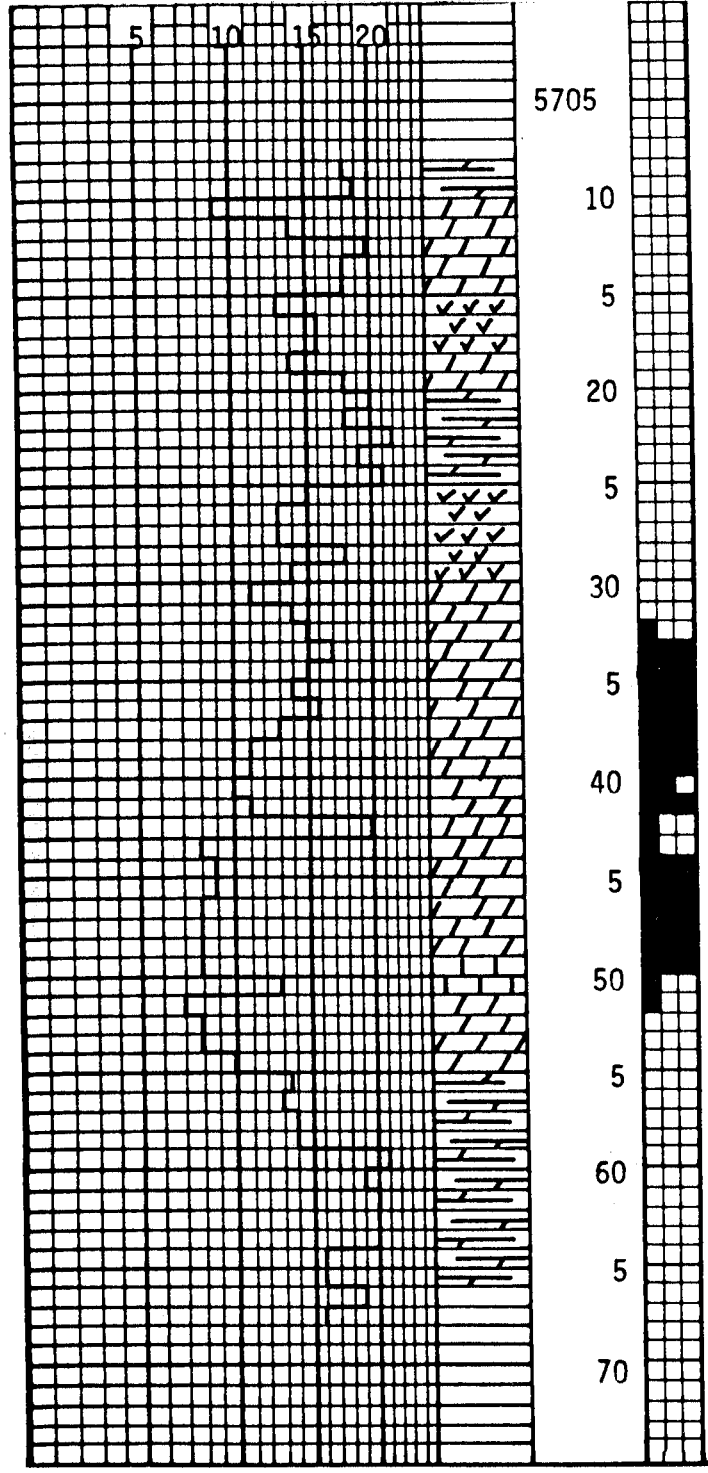
LS- m gy, crinoid, f-micxln, patchy yel-gn, sl yel-gn cut.

LS & DOLO- mott, tan-m gy, vfxln ip, micxln ip, occ patchy yel-gn flor, sl yel-gn mlky cut, tr crinoid.

5496.5-5500 NO RECOVERY.



5500	LS- buff-crm, cxln, foss-crinoidal, good interxlnø, pnpt vugs, patchy yel-gn flor, good yel-gn strmg cut.
5	LS & DOLO- patchy dolo in ls, tan-m gy, vf-cxln, good interxln ø, wk milky yel-gn cut.
10	DOLO- tan, fxln, good interxln ø, overall yel-gn flor, good yel-gn strmg cut.
5	LS- m gy, dns, vf-micxln, tr crinoids, NSOFC.
20	LS- tan-buff, dolo, vfxln, crinoidal, indist foss, patchy yel-gn flor, mod yel-gn strmg cut,
5	LS- lt-mbrn, fxln, dolo, blk dead oil stn, fair interxln ø, occ anhy nod's, tr patchy yel-gn flor, wk milky cut. DOLO- lt gybrn, vfxln, abundant pnpt vugs, patchy yel-gn flor, good yel-gn strmg cut.
30	LS- m gybrn, vf-micxln, no vis ø, anhy nod's, anhy xln fill, NSOFC.
5	LS- lt brn-and sm tan, dolo, vfxln, brit-mhd, NSOFC.
40	SH- blk, dolo, v dns, vfxln, brit-mhd, NSOFC.
5	SH- aa.
50	
5	SH- aa.
60	



5705	
10	MUDSTN- blk, dolo, dns, fiss ip.
5	ANHY- lt gy, chickenwire texture with blk dolo mudstn matrix.
20	DOLO- lt gy, fxln, anhy, dns.
	DOLO- mudstn, dk gy, fiss, anhy.
5	ANHY- lt gy, dns.
30	DOLO- brn, vfxln, calc, good pnpt ø, dk patchy stn, even brt yel-gold flor, fast mlky cut. ALGAL
5	DOLO- brn, micxln, anhy, fair pnpt ø, fair interxln ø, patchy brt yel flor, fast strmg mlky cut. ALGAL
40	DOLO- aa.
5	DOLO- gy-brn, f-mxln, calc, anhy, good interxln ø, patchy dk stn, patchy dull yel-gn flor, fast strmg cut. ALGAL
50	DOLO- aa.
5	DOLO- gybrn, fxln, no algal, dns, bleeding salt water.
60	SH- v dk gy, fiss, dolo, brach.
5	SH- aa.
70	5766'-68' no recovery

CELSIUS ENERGY COMPANY
PATTERSON UNIT NO. 9
SECTION 33, T37S, R25E
SAN JUAN COUNTY - UTAH

FORMATION TOPS

FORMATION	SAMPLE TOP
HERMOSA (HONAKER TRAIL)	4344'
PARADOX	4890'
ISMAY	5428'
ISMAY Ø	5451-59'
ISMAY SHALE	5541'
LOWER ISMAY	5594'
"B" ZONE SHALE	5644'
DESERT CREEK	5664'
DESERT CREEK Ø	5734'
TOTAL DEPTH	5812'

CELSIUS ENERGY COMPANY
PATTERSON UNIT NO. 9

SAMPLE DESCRIPTION

4000-4020	50% SLTST redorg-ltbrn blky calc sdy ip sft-frm
	30% SH rust-redorg /occ ltbrn plty slty slcalc-calc sft-frm
	20% SS ltbrn slty-vfg sbrd msrt mcmt calc mica arg vtt frm
4020-4040	65% SH AA
	20% SLTST AA
	15% SS AA
4040-4060	65% SLTST redbrn-org ltbrn wh mott sdy ip calc blky sft-frm
	35% SH rust-redbrn plty-blky smth ip ncalc-calc frm
4060-4080	65% SLTST AA
	20% SH AA bcmg ltbrn /occ mott & vcalc
	10% LS rose ltgy fxln-slty blky arg ip brit
4080-4100	55% SLTST redbrn-ltredorg ltbrn blky calc frm
	20% SS frst-wh fg sbrd-sbang msrt mcmt slcalc-calc mica/
	TR GLAUC frm
	15% SH AA
	10% LS AA pred rose & slty
4100-4120	40% SLTST AA
	25% SS AA
	20% SH tlbrn wh mot blky lmy ip sdy ip calc sft
	15% LS AA
4120-4150	40% SLTST redorg-brn blky lmy ip sdy ip sft
	25% SH AA
	20% SS AA
	15% LS rose-ltgy vfxl-slty blky arg ip dns brit
4150-4170	35% SS wh-clr-frst fg sbrd-rdd /sm sbang m-wsrt calc /
	TR GLAUC frm
	30% SLTST AA
	20% SH ltbrn-brn /sm wh blky-plty calc lmy ip frm
	15% LS AA
4170-4200	50% SS AA
	35% SLTST redorg brn sdy ip calc frm
	15% SH AA
4200-4240	40% SLTST red redbrn brn blky calc-lmy ip mica sft-frm
	30% SS AA
	30% SH red-redbrn blky-plty calc slty sft-frm
4240-4260	50% SLTST AA
	20% SH AA
	15% SS wh-frst-clr s&p fg sbrd-rdd m-wsrt mcmt vcalc slty ip frm-fri
	15% COAL blk vit shly brit
4260-4270	40% SLTST redorg-redbrn blky calc frm
	20% SH AA
	20% LS AA incrg rose tan
	20% SS AA
4270-4290	60% LS lt-mgy sdy-slty fxln ip blky-plty /occ calc fl fracs varg ip bri-frm
	40% SLTST AA bcmg mbrn slty plty mica slcalc frm
4290-4310	70% SLTST AA
	15% LS AA rose slty
	15% SH mbrn slty plty slcalc mic sft-frm
4310-4320	60% SLTST brn-redbrn vmica ip slcalc-calc frm
	20% SH AA
	20% SS wh-frst f-vfg sbang msrt wcmt calc gn mic tt fri-frm
4320-4340	55% SLTST AA
	25% SH AA
	15% LS gy rose micxl-slty blky brit
	15% SS AA

CELSIUS ENERGY COMPANY
PATTERSON UNIT NO. 9
SAMPLE DESCRIPTION CONT

4340-4350 40% LS lt-mgy brn-gybrn fxln-micxln vslty ip arg ip blky-plty frm-mhd
35% SLTST redbrn-org /occ wh incl calc blky frm
15% SH mbrn-red brn slty slcalc frm
10% SS AA

4350-4370 70% LS offwh-ltgy gybrn /occ dkgy vsdy ip chky-micxl ool ip blky-plty frm-hd
30% SLTST AA

4370-4380 70% LS AA decr ool & incr ltbrn micxl-crpxl
30% SLTST redbrn-org /occ wh incl calc blky frm

4380-4390 90% LS wh-buf-crm vltbrn mic-crpxl cln blky-plty brit-hd
10% SLTST AA

4390-4400 40% LS AA incr sdy fxl-occ micxl
30% SLTST red-redbrn blky calc frm-vfrm
30% SH brn-dkbrn blky-plty calc slty ip frm

4400-4410 75% LS AA sdy-cxln arg ltgy-offwh
25% SLTST AA

4410-4420 60% LS AA
25% SLTST redbrn calc blky-plty
15% SS wh-frst f-vfg sbrd-rdd msrt m-wcmt calc fri-frm

4420-4430 80% LS offwh-ltgy ltgybrn vsdy-cxl micxl ip slarg vfrm-mhd
20% SLTST AA

4430-4440 80% LS pred ltbrn-gybrn mic-crpxl /occ CHT trans-brn vhd
20% SLTST AA

4440-4450 90% LS AA
10% SLTST AA

4450-4470 100% LS pred ltbrn-gybrn-dkbrn mic-crpxl /occ fxl varg /
ABNT INDIST FOSS FRAGS

4470-4480 60% LS AA bcmg vsdy
25% SS frst-wh-ltgy vfg sbrd wsrt vwcmt grdg to v sdy LS vfrm
15% SLTST lt-mgy ltbrn vmica vcalc sdy blky frm

4480-4490 35% LS AA
25% SLTST AA
20% SS AA
20% SH brn slty mica frm

4490-4500 70% SLTST lt-mgy ltbrn vmic vcalc sdy frm
20% LS lt-mgy sdy fxln blky slarg frm
10% SS AA

4500-4520 35% LS AA vsdy
35% SS frst-wh ltgy vfg/occ mg msrt wcmt vcalc mica/
TR GLAUC fri
30% SLTST AA

4520-4530 70% LS lt-mgy vsdy cxl slty blky mica frm-brit
20% SS AA
10% SLTST redbrn slty blky calc frm-brit

4530-4540 85% LS AA
15% SLTST AA

4540-4550 65% LS AA
20% SLTST AA
15% SS wh-frst-clr ltgy f-mg w/sm vfg mcmt calc fri-frm

4550-4560 35% LS lt-mgy sdy fxln blky frm-brit
35% SLTST redbrn-org blky calc shly frm-sl brit
30% SS AA

4560-4580 40% LS AA
40% SLTST pred mgy redbrn sdy calc
20% SS AA

4580-4590 35% LS ltgy tan wh blky-plty fxl-mic crpxl arg ip frm-brit
35% SH m-dkgy blky pry slcalc frm
30% SLTST AA

CELSIUS ENERGY COMPANY
MESAGAR FEDERAL 10-1
SAMPLE DESCRIPTION CONT

4590-4600	50% LS AA incr sdy
	25% SH AA
	25% SLTST AA mgy
4600-4610	75% LS ltgy sdy fxl blky slarg frm-sl brit
	25% SLTST mgy /occ redbrn calc blky frm
4610-4630	90% LS offwh-pred dkbrn micxl varg ip dns
	10% SLTST AA
4630-4640	70% LS lt-mgy gybrn slty-micxl blky-plty sft-brit
	30% SLTST mgy /occ redbrn (CUTLER) shly ip vcalc ip frm-sft
4640-4650	60% LS AA cxln-sdy
	40% SLTST AA bcmg incr sd-
4650-4660	60% SLTST redbrn-org brn blky calc frm-brit
	25% LS AA
	15% SH dkbrn blky dns vcalc vfxl mic brit-mhd
4660-4680	60% SLTST AA
	40% SH AA
4680-4790	70% SLTST ltbrn-redbrn lt-mgy slty ip slcalc-calc blky plty sft-brit
	30% SH AA
4690-4700	80% SLTST AA
	20% SH brn-dkbrn dns mica calc brit-mhd
4700-4710	50% LS tan-wh buf-gybrn mic-crpxl blky slarg
	35% SLTST AA bcmg pred redorg-org
	15% SH AA
4710-4720	75% LS AA bcmg cln
	25% SLTST AA
4720-4730	70% LS wh-ltgy gybrn mic-crpxl blky-ang ip dns ip slarg ip frm-mhd
	30% SLTST AA
4730-4740	70% SLTST ltgy redbrn-brn sdy lmy ip calc ip frm-brit
	30% LS AA
4740-4770	65% SLTST AA
	20% SS ltgy-ltbrn slty-vfg wsrt wcmt slcalc vmica frm
	15% LS wh-ltgy blky-plty mic-crpxl arg ip frm-vfrm
4770-4780	55% SLTST AA
	35% LS AA
	10% SS AA wh-clr glauc ip
4780-4810	70% LS wh-ltgy vfxl-micxl blky-ang arg ip frm-vfrm
	30% SLTST redorg-rose plty slcalc frm
4810-4820	80% LS pred mgy fxl-slty /occ micxl arg frm-brit
	20% SLTST AA
4820-4830	60% LS offwh-ltgy /occ mgy f-micxl mott ip plty frm-brit
	20% SLTST AA
	20% SS wh-frst ltgy m-vfg msrt wcmt calc arg fri-frm
4830-4840	35% LS AA
	35% SS frst-vltgy pred mg sbrd-sbang m-wsrt mcmt slcalc /occ clr ang QTZ FRAGS fri-frm
	30% SLTST redorg-rose brn blky-plty slcalc shly ip frm
4840-4850	35% LS AA
	30% SS AA
	35% SLTST AA
4850-4860	60% SLTST redorg-rose blky-plty slcalc frm-brit
	40% LS lt-mgy cxl-sdy blky arg brit-vfrm
4860-4880	60% SLTST redbrn-org ltbrn sdy calc-slcalc blky-plty
	25% SH dkbrn dns lmy-calc vfxl brit-mhd
	15% LS AA
4880-4890	40% SLTST AA
	40% LS AA
	20% SH AA

CELSIUS ENERGY COMPANY
MESAGAR FEDERAL 10-1
SAMPLE DESCRIPTION CONT

4890-4900 80% LS wh-crm vltgy vfxl-micxl cln plty frm-brit
20% SLTST AA
4900-4910 50% LS lt-mgy c-fxl blky-plty mica arg frm-mhd
25% SH gy-dkgy slty vfxl dns brit
25% SLTST redbrn blky calc
4910-4920 90% LS AA
10% SLTST AA
4920-4930 80% LS m-dkgy varg vfxl shly dns brit
20% SLTST AA
4930-4940 90% LS mgy mic-fxl ool arg blky brit
10% SLTST redbrn-org blky calc-slcalc vfrm
4940-4980 80% LS lt-mgy wh vf-micxl blky dns brit
20% SLTST AA
4980-5000 65% SH vdkgybrn plty-blky vfxl dolo-lmy vdns brit-hd
20% LS AA
15% SLTST red-redbrn blky calc frm-slbrit
5000-5020 60% LS ofwh ltgybrn mic-crpxl /occ vfxl slarg blky-ang brit
20% SH AA
20% SLTST AA
5020-5040 60% SLTST lt-mgy redbrn vsdy slcalc mica brit
25% LS AA
15% SH mbrn dkgy slty ip dns ip n-slcalc frm
5040-5050 70% SLTST AA bcmg redbrn
20% LS AA
10% SH AA
5050-5060 40% SLTST redbrn /occ ltgy plty-blky slcalc-calc vfrm
40% LS ltgy-ltgybrn mic-crpxl blky-plty dolo w/
FLOR min ip dns ip brit-hd
20% SH AA
5060-5070 80% LS ltgybrn-gybrn ofwh ool micxl dns ip brit
20% SLTST AA
5070-5080 100% LS AA
5080-5090 60% LS AA decr ool
30% SH dkgy blky calc dolo ip fxl dns brit-mhd
10% CHT trans-vltbrn conch vhd
5090-5110 70% SH AA
30% LS AA
5110-5120 65% SH mgy-occ ltgy blk blky calc-calc grdg to COAL ip vfrm-mhd
35% LS ofwh-ltgybrn f-micxl arg blky brit
5120-5130 70% LS ltgy-gy /occ wh plty-blky vf-micxl frm-vfrm w/sm sft
30% SH AA
5130-5140 90% LS AA /occ clr-smky-trans vhd conch CHT
10% SH AA
5140-5150 100% LS AA /incr crpxl
TR CHT clr-smky conch vhd
5150-5190 80% SH gy-vdkgy plty-blky vfxl dolo-lmy ip dns vfrm-brit
20% LS ltgybrn micxl blky-ang brit
5190-5200 60% SH AA
40% LS AA
5200-5210 70% LS ofwh ltgybrn f-crpxl dns ip plty /occ arg brit-mhd
30% SH vdkgy dolo-calc vfxl dns brit
5210-5220 70% SH AA
30% LS AA bcmg foss indist
5220-5250 80% LS ofwh gybrn f-crpxl dns ip blky-ang frm-mhd
20% SH m-dkgy blk /
TR COAL vcarb varg & dns ip brit
5250-5260 70% SH m-dkgy plty dns dolo-lmy pyr brit
30% LS AA

CELSIUS ENERGY COMPANY
MESAGAR FEDERAL 10-1
SAMPLE DESCRIPTION CONT

5260-5280	60% SH AA
	40% LS ltgy-gybrn f-crpxl /occ ool dns ip arg ip frm-mhd
5280-5300	70% LS ltgy wh chky ip f-crpxl ip dns ip frm-mhd w/sm vsft
	30% SH AA
5300-5320	75% SH m-dkgy plty dns dolo-lmy vfrm brit
	25% LS ltgy gybrn f-micxl dns ip arg ip frm-brit
5320-5330	65% SH AA
	35% LS AA
5330-5340	50% LS ltgy ofwh plty blky micxl dns ip vfrm brit chty trans-clr-tan conch-ang vhd
	50% SH AA
5340-5350	75% LS AA vchty AA
	25% SH m-dkgy plty dolo-lmy dns vfxl brit
5350-5370	80% LS ltgybrn-gybrn f-micxl dns ip frm-brit
	20% CHT trans-ltbrn smky/ FLOR dul org min v hd
5370-5400	90% LS AA vsdy /
	TR FLOR AA/NO CUT
	10% SH m-dkgybrn dolo dns fxl brit
5400-5440	70% SH AA
	30% LS AA /occ CVGS
5440-5500	SEE CORE DESCRIPTION #1
5500-5560	SEE CORE DESCRIPTION #2
5560-5590	80% SH dkgy carb blky slcalc
	20% LS lt-mgy f-micxl slty arg blky frm-brit
5590-5600	65% SH AA
	35% LS AA
5600-5620	60% LS ltgy-gybrn f-micxl blky arg ip frm-brit
	20% ANHY wh-trns cxl-suc frm
	20% SH gy-mgy dolo dns frm-brit w/sm sft
5620-5630	35% LS AA
	35% ANHY wh-clr vfxl chky
	30% SH AA
5630-5640	50% ANHY AA
	30% LS ltgy-gy f-micxl blky arg frm-brit
	20% SH AA
5640-5650	35% LS AA
	25% SH AA
	20% DOLO tan-ltbrn fxl blky frm
	20% ANHY AA
5650-5670	35% SLTST mgy slcalc /occ carb sft-frm
	25% SH m-dkgy carb-sooty slcalc frm-vfrm
	20% DOLO AA
	10% ANHY wh chky-gummy blky sft
5670-5680	55% ANHY wh chky-gummy blky sft
	35% SH m-dkgy slty /occ carb frm
	10% DOLO ltbrn-tan cxl-sdy blky grdg to LS NSFOC
5680-5690	70% ANHY AA
	20% SH AA
	10% DOLO AA
5690-5700	50% LS mgy-gy arg fxl blky dolo ip frm-brit
	25% ANHY AA
	25% SH AA
5700-5708	60% LS AA
	40% SH AA
4708-5768	SEE CORE DESCRIPTION SHEET #3
5768-5780	50% SH pred dkgy carb ip dolo ip blky dns frm-vfrm

CELSIUS ENERGY COMPANY
MESAGAR FEDERAL 10-1
SAMPLE DESCRIPTION CONT

5768-5780	25% SLTST lt-mgy shly calc-dolo blky frm
	25% LS ltgy ltbrn blky shly sft-frm
5780-5812	50-70% LS ltgy-dkgy-gy vfxl w/sm fxl blky-plty frm-brit
	30-50% SH AA
	TR ANHY wh chky sft
5812	TD

GEOLOGIC SUMMARY
AND
ZONES OF INTEREST

The Celsius Energy Company's well Patterson Unit No. 9, located in Section 33, T37S, R25E of San Juan County, Utah, was spudded 11 August, 1984. Geological coverage began at 4000' in the Cutler Formation. A total depth of 5812' was reached on 3 September in the Desert Creek Formation.

CUTLER FORMATION

Cuttings contained predominantely interbedded continental red to red-orange siltstone and shale. Occasionally there were frosted white, calcareous and friable sandstone, with a few light gray to rose silty limestones noted in the samples.

Background gas at the start of logging was high, 75-100 units, due to an oily mud storage tank. Mud from another hole was stored in it for later use on this well. Roughnecks failed to catch any samples from surface to 4000 feet. There was no evidence of drilled hydrocarbons in this formation.

HONAKER TRAIL FM (HERMOSA GROUP) (4344' - 4890')

The Honaker Trail Formation was picked by samples at 4344' with the appearance of a massive limestone interval. A 30 foot oolitic limestone was observed at the top of the formation. Although the samples were predominantely limestone, a few siltstone and shale stringers were present.

Three hydrocarbon shows were encountered between 4504'-4522'. Show #1 of 55 units was drilled from 4504'-4506'; Show #2 of 45 units was noted from 4513'-4515'; Show #3 of 35 units was observed between 4520'-4522'. Samples contained very calcareous, well cemented, white to frosted, friable sandstone. However, there were no associated drilling breaks and no drill stem test was warranted.

Samples between 4520'and 4770' showed various changes in lithology and depositional environments. Samples ranged from clean to argillaceous limestone to dense calcareous shale and siltstone. Show #4 of 28 units was noted from 4776'-4790' in silty, micaceous and calcareous sandstone. Again there was no drilling break and no drill stem test was justified.

The cuttings returned to limestone, gray and very fine crystalline in character. A thick sand was drilled from 4818'-4840'with a drilling break from 7.5 minutes per foot down to 1.5 minutes per foot. No show was observed and no tests were run.

The remainder of the Honaker Trail consisted mainly of marine red-orange to red-brown siltsone and shale. A few dark brown shale and thin limestone lenses were drilled.

PARADOX FM (4890' - 5428')

The top of the Paradox was picked by sample by a slight drill rate decrease, along with 80% white-buff, micro-very fine crystalline, clean limestone noted in the samples. This limestone continued to 4960'. Limestone with a few dense calcareous shale and siltstone continued until Show #5 of 20 units was observed at 5080' to 5082'. Show samples contained oolites in a dense, sometimes cherty limestone. Although the hotwire showed 20 units, the chromatograph showed a reversal on the chart. This anomaly appears to be inert in nature, most likely N_2.

Show #6 of 110 units was observed from 5114'-5116' in a very dense, dark gray, dolomitic, shale. A thin coaly streak was responsible for the gas show. No tests were warranted.

Samples returned to a cherty limestone with an immediate 40' dense dolomitic shale following. Show #7 of 50 units was noted between 5221'-5231' in fine crystalline, fossilferrous limestone. No test was warranted.

At 5330' another cherty limestone sequence was drilled, generally devoid of shale. Show #8 of 75 units was encountered between 5353'-5355'. Samples contained fine microcrystalline cherty limestone, containing a trace of yellow-green fluorescence with a slight, streaming, yellow-green cut. No test was advised on such a small interval.

The above mentioned limestone gave way to a very dark gray-brown shale from 5390'-5400'. Whow #9 of 150 units was logged in this interval. No test was advised for this shale show. The second Ismay Shale was drilled from 5403'-5428'. Samples contained medium to dark gray, silty, dolomitic shale. The base of this interval marker defines the upper limit of the Ismay Formation.

ISMAY FM (5428' - 5664')

After base of second Ismay Shale, we looked for two thin anhydrites as a marker for a core point. At 5435' the drill rate changed from 8 minutes per foot to 10 minutes per foot. Samples that were circulated up contained no mud contamination or anhydrite. Then 5 more feet was drilled, with the same results. Based on log correlation with Tricentrol 3-11, core point was picked at 5440'. Correlation showed that probably one of the anhydrite stringers was drilled, although no evidence was observed from the mud or samples.

A 60' core barrel was picked up while tripping out. Our correlation proved correct, as one anhydrite interval was located in the top of the core from 5442'-5443.5'. A thin shale was cored between the anhydrite and the actual carbonate section. The core interval was from 5440'-5500'. The Ismay porosity was cored from 5451'-5459'; this interval contained Show #12 of 175 units. Core chips showed a coarse crystalline and fossiliferrous limestone. Show #13 of 70 units, 5475'-5480', showed a tan, very fine crystalline dolomite. Show #14 of 110 units, 5486'-5491', was cored with dolomite as in Show #13. (See Core Sheet #1 for detailed rock and show descriptions.) No other reservoir rock was observed in Core #1.

The interval from 5430'-5500' was drill stem tested (see DST Report #1). Recovery contained 1200' of oil and gas cut mud. Sample chamber contained .45 cubic foot of gas and 600 cc's of 48^{o} gravity oil.

After DST #1 a core barrel was put on to core interval 5000'-5560'. (See Core Sheet #2) Several tan, fine, crystalline dolomites were cored, but no significant shows were observed. High background gas from previous cored section probably masked shows in this zone. The core was laid down and this interval was drill stem tested. (See DST Report #2) Recovery contained 700' oil and gas cut mud and 100' of water. The sample chamber contained 0.14 cubic foot of gas, 200 cc's oil and 1800 cc's water. The chloride ppm count on recovered water was approximately 8000 ppm. Ismay chlorides typically exceed 220,000 ppm. Thus recovered water is considered filtrate and not from the formation.

CELSIUS ENERGY COMPANY
PATTERSON UNIT NO. 9
GEOLOGIC SUMMARY CONTINUED

After DST #2 drilling was resumed to core point #3. The Ismay Shale was observed at 5541' in Core #2. The lower Ismay was drilled from 5594'-5644' which contained massive anhydrites and dark gray shale. No evidence of hydrocarbons were noted.

The "B" Zone shale was drilled from 5644'-5664'. Samples showed medium to dark gray shaly siltstone and shale, often carbonaceous. Show #15 of 44 units was logged from 5650'-5659'. No test was advised.

DESERT CREEK (5664' - T. D.)

The Desert Creek Formation was piced at 5664' and Show #16 of 150 units was logged at this depth. This show was attributed to a thin dolomite on top of the Desert Creek. Massive anhydrites and a few shales and limestones were drilled down to Core Point #3 at 5708'. Original core point #3 was picked by correlation at 5710', but bit gave out at 5708'. Coring then began at 5708'to 5768' and the porosity was cored from 5734'-5756'. (See Core Sheet #3) Core contained fine crystalline and pinpoint vuggy dolomite with good staining and oil show. Show #17 of 60 units was noted at this interval.

A drill stem test was run from 5728'-5768'. Recovery contained 1588' of gas cut oil (22 barrels) and 1000' salt water (10 barrels). Sample chamber contained 1.08 cubic feet of gas, 900 cc's oil and 200 cc's salt water at 355 psi. (See DST Report #3)

DST #3 was rather unique. After final shut in, the tool was tripped out of the hole. Upon encountering fluids in the pipe, the tool unloaded its contents all over the rig and location. Engines and lights were shut down immediately to reduce a very dangerous possibility of a source of combustion. Fortunately, no problems were encountered! Several hours were required to clean up the rig and remaining fluids were reversed out.

After DST #3 a bit was run to bottom to drill the rathole. Total depth was suppose to be in the first few feet of salt; but at 5812' none had been observed and total depth was reached at that depth.

COMMENTS:

I very much appreciated the opportunity to serve as your wellsite geologist. Please do not hesitate to call if you any further questions concerning this well. Thank you and I hope to work with you again in the near future.

Sincerely

Jay Dean Carter

RMCC

MOUNTAIN FUEL
SUPPLY COMPANY
Natural Gas Service

OPERATOR	CELSIUS ENERGY CO.
AREA	PATTERSON(LITTLE NANCY FLD)
WELL	PATTERSON UNIT#9
COUNTY / STATE	SAN JUAN / UTAH
SPUD DATE	8/11/84
RIG RELEASED	
FINAL STATUS	
CASING	9 5/8" SET TO 1615'
REMARKS	

SURVEY: T. 37S R. 25E, 33, X

KB 5355'
GR 5341'
TD *5812'*

T. R. SEC. WELL

DEPTH | DRILL RATE MIN. / FOOT | DST / CORE | LITHOLOGY | FOOTAGE | SAMPLE DESCRIPTION

BEGIN LOGGING @ 4000'
8/19/84

8/19/84 (PERMIAN)
CUTLER FM.

SLTST - RUST-Lt BRN, BLKY, CALC, SDY, frm.
SH - Red-orng, occ lt brn, plty, slty, SL calc/calc, sft-frm.
TR SS - Lt brn, slty-vfgr, mica.
SLTST - aa, BCMG Lt Brn, mott w wh, vcalc. v shly.
SH - Redbrn, Lt brn w wh, grd's to varg, slty LS.
SLTST - Redbrn, orng, Rose, BLKY, calc, frm.
SS - frst-wh, fgr, sbrnd-sbang, msrt, wcmt, calc, mica, frm
SH - Lt brn mott w wh, v calc, grd's to varg LS, plty sft-frm
SLTST - aa sm Lt brn.
SS - wh, clr, frst, sbrnd-rnd, occ sbang, m-wsrt, fgr, wcmt, calc, frm-fri,
SH - brn, Lt brn w sm wh, BLKY-plty, Calc-Lmy.
SS - aa.
SH - RED-REDBRN, blky-plty, calc, slty, sft-frm.
SLTST - Redbrn-orng, shly, blky, calc, frm.
COAL - blk, vit, shly, BRIT.
SLTST - aa.
LS - Lt-mgy, sndy-slty, fxln, blky-plty, occ calcite frac fill, arg, vfrm-brit.
SLTST - aa, bcmg mbrn, plty, mica, sl calc, frm.
SS - wh, frst, vfgr-fgr, sbang, msrt, wcmt, calc, gn mica, tt, fri-frm.
SLTST - brn, redbrn, v mica ip.
LS - Lt-mgy, brn-gybrn, orng mott w wh, arg, vslty ip, frm.
LS - off wh-Ltgy, gybrn, occ DK GY, vsndy ip, CRKY-micxln, oöl ip, BLKY-PLty, frm-mhd.
LS - aa incr Lt brn, mic-cryptxln, decr oöl
LS - wh-buff-crm, v Lt brn, mic-cryptxln, CLN, Brit-hd.
SH - DK brn, brn, calc, slty, frm.
LS - aa, sndy-cxln, Lt gy, arg, frm.
LS - offwh-Ltgy, Ltgybrn, vsndy-cxln, micxln ip, slarg, vfrm-mhd.
LS - PRED Lt brn, gybrn, mic-cryptxln, occ trans-brn CHERT vhd.
LS - Pred Lt brn, gybrn, DK BRN, mic-cryptxln, occ fxln + varg. Abundt undist foss frags.
LS - aa decr foss, incr sndy.
SLTST - Lt-mgy, Lt brn, v mica, v calc, sndy, frm.
SS - frst-wh, Ltgy, vf-occ mgr, vcalc-Lmy, Tr glauc.
LS - Lt-mgy, vsndy, cxln, slty, occ mica, frm-brit.
LS - aa
SS - wh, frst, Ltgy, f-mgr, vcalc, fri-frm.
SLTST - Redbrn-orng, calc, shly.
LS - Lt-mgy, sndy, fxln, frm-brit
SLTST - PRED mGY, sndy, calc, occ Lmy, frm.
LS - Ltgy, tan, fx-mic, occ cryptxln, TR ANHY wh, BLKY, sft.
LS - offwh, PRED DK BRN, micxln, varg IP, dns, Brit-mhd.
LS - Lt-mgy, gybrn, blky-micxln, BLKY-plty, sft-brit.
SLTST - mGY, slty, v calc ip, frm-sft.
SLTST - Redbrn-orng, brn, blky, calc, frm-brit.
SH - DK brn, blky, dns, vcalc, fxln, occ mica, brit-mhd.
SLTST - aa.
SLTST - PRED redorng, Lt brn, Lt-mgy, sl calc-calc, sft-brit.
LS - TAN-WH, BUFF-GYBRN, mic-cryptxln, SL arg, brit.
LS - aa bcmg clean.
SLTST - Ltgy, redbrn, brn, sndy, Lmy IP, calc IP, frm.
SS - Ltgy-Lt brn, slty-vfgr, wcmt, sl calc, v mica, frm.
SLTST - aa
LS - wh-Ltgy, vfxln-micxln, blky-ang, arg ip, frm-vfrm
LS - aa, incr Ltgy-gy, micxln, shly.
LS - wh, gy, Ltgy, vfxln-micxln, w/s cryptxln, BLKY-ANG, frm-vfrm.
SS - wh, clr, frst, f-mgr, sbrd-sbang, msrt, wcmt, calc, occ glauc, fri-frm.
SLTST - Redorng-rose, brn, sl calc, frm.
SLTST - aa
SLTST - aa, PRED Redorng-rose, occ Lt brn, sndy, calc-sl calc, plty-blky, frm.
LS - wh, crm, vLtgy, vfxln-mic xln, CLN, plty, frm-brit
LS - Lt-mgy, f-fxln, mica, arg, frm-mhd.
LS - m-dkgy, varg, vflxn, shly, dns.
LS - mgy, mic-fxln, oöl, arg, Brit.
LS - Lt-mgy, wh, vfxln-micxln, blky, dns, brit.
LS - aa
SH - vdkbrn-DK GYbrn, vflxn, dolo, Lmy IP, vdns, Brit-hd.
LS - offwh-Ltgybrn, mic-cryptxln, sl arg, blky-Brit, v Brit ip.
LS - aa, bcmg Ltgy, fxln, frm-vfrm.
SLTST - Lt-mgy, Redbrn, sndy, sl calc, mica, brit.
SH - mbrn, dkgy, slty ip, dns ip, N/sl calc, frm.
SLTST - aa, bcmg redbrn.
LS - Ltgybrn-gybrn, mic-crypt, oöl, dns, Brit.
LS - aa
CHERT - trans-vLtbrn, conch, vhd.
SH - DKGY, dolo-calc, fxln, dns.
SH - aa, occ v CARB-coaly.
LS - Ltgy-gy, occ wh, plty-blky, vf-micxln, frm-vfrm.
LS - aa occ trans-smky brn CHERT
LS - aa incr crytxln, CHERTY.
SH - m-DKGY, PLty, dolo-Lmy, DNS, BRIT-mhd.
SH - aa.
LS - Ltgy-gy, mic-cryptxln, BRIT
SH - m-dkgy, calc-Lmy, frm-brit.
LS - off wh, Ltgybrn, fxln-micxln, dns ip, occ ANG, arg ip.
SH - aa, v dkgy, dolo-calc, vflxn, dns, brit.
LS - aa, bcmg foss, undist.
LS - aa, off wh-gybrn, fxln-cryptxln, dns ip, frm, mhd.
SH - m-dkgy, plty, dns, dolo, pyr, Brit.
LS - Ltgy-gybrn, fxln-cryptxln, oöl ip
SH - aa
LS - Ltgy-wh, chky, fxln-crypt, dns ip, frm-mhd, sm v sft.
LS - aa, incr Ltgy-gybrn.
SH - m-DKGY, plty, dns, dolo
SH - aa
LS - Ltgy, offwh, micxln, dns, frm.
CHERT - trans-tan, conch, vhd.
LS - gybrn-Ltgybrn, fxln-mic, occ cxln, v cherty.
LS - aa.
LS - Ltgybrn, cxln-sndy, tr pyr, BLKY-plty, frm-brit.
SH - dkgybrn, Lmy-dolo, dns, xln, brit.
SH - mGY, occ Redorng, slty, dolo-sl calc, frm-vfrm.
SH - m-dkgy, Redorng, slty, dolo, frm-vfrm.
ANHY - wh-opaq, fxln-suc, BLKY, frm.
LS - wh-crm, foss, cxln, Calc xl's, pnpt blk oil stn, spty yel-gn flor + cut
LS - Ltgybrn, vf-micxln, No vis ϕ.
DOLO - tan-Lt brn, fxln, tr pnpt vugs.
LS - m-dkgy, vdns, TR crinoids.
Dolo - tan-buff, vf-fxln, occ pnpt vugs, good yel-gn flor & strng cut.
LS mgy w tan dolo patchs, vf-fxln, good yel-gn flor & strng yel-gn cut
Dolo - aa
Dolo - Ltgybrn, vfxln, pnpt vugs, patchy yel-gn flor + good strng yel-gn cut.
SH - blk, dolo, dns, vfxln, Brit-HD
SH - aa v slty.
SH - bLK, dns, dolo, vfxln, mhd.
SH - aa.
LS - Ltgy-gy, f-micxln, slty-shly, arg, frm-brit.
LS - aa
ANHY - wh, cxln-suc, BlKy, frm.
ANHY - aa chky ip.
SLTST + SH - m-DKGY, Carb-Sooty, sl calc, frm.
DOLO - Ltbrn-tan, cxln-sndy, BlKy, Grd's to LS.
ANHY - wh, chky-gummy, blky, sft.
LS - GY-mGY, fxln, arg, BLKY, dolo ip, frm-brit.
LS - aa, v arg.
ANHY - wh, chky-vfxln, frm.
DOLO - tan-Ltbrn, fxln, pnpt vugs, good stn & fast cut.
Dolo - aa.
SH - bLK-dkgy, dolo, dns, brit.
LS - Ltgy-Lt brn, dolo, v arg, frm-brit.
LS - Lt gy, vf-micxln, blky-plty, frm-brit.
SH - aa
TR ANHY - wh, fxln, sft.
TD - 5812'
Wellsite Geologist: Jay Carter